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Original Articles.

TEN ABDOMINAL SECTIONS FOR OVARIOTOMY AND HYSTERECTOMY. NINE RECOVERIES AND ONE DEATH.

PRIVATE HOSPITAL WORK.

By R. Stansbury Sutton, A.M., M.D., Pittsburgh, Pa.

In accord with a promise made through the columns of this journal, I now procede to report all the laparotomies done in my private hospital since its opening in September last. In none of these cases has any spray been used, and in only two, the last couple, has any carbolic acid been used in the water for the sponges and instruments. In all the cases the abdominal wound has been dressed antiseptically. All the ligatures and sutures have been used from a five per cent solution of carbolic acid. The temperature of the operating room has always been above 80° F., the floor has always been wet with a solution of sublimate 1-2000. Those present at the operation have always been few, and they have left their coats outside the operating room. Of the ten cases now to be given in detail, nine recovered and one died of embolism of the pulmonary artery on the fifth day. In three of the cases both ovaries and tubes and the uterus above the vaginal attachment were removed. These cases all recovered. The remaining seven cases were ovariotomies for cysts of one or both ovaries, and for solid tumors of the ovary. The tumor in the fatal case was a sarcoma of the left ovary and weighed five pounds.

Case 1, Oct. 22, 1883. Mrs. J. B., aged 26. Multilocular cyst of left ovary; weight, 12 pounds. No adhesions. Pedicle tied with silk, and dropped in. Present Drs. Rahauser and Parke of Wellsville, Ohio. No after medicine required. Temperature never taken. Recovery rapid.

Case 2. Nov. 8, 1883. Mrs. K. M. O., aged 36; multilocular cyst of left ovary, weght 18 pounds. No adhesions. Present Dr. Rahauser, assistant, Drs. Hatton and Robinson of West Newton, Pa. Pedicle tied with silk and dropped in. No after medication was required. Highest temp. 100° F. Recovery rapid.

Case 3. Dec. 28, 1883. Mrs. S C., aged 30. Multilocular cyst, right ovary; extensive adhesions to omentum and walls of abdomen; pedicle immense; patient feeble. Weight of cysts and fluid about twenty pounds, not weighed. The pedicle was tied and burned off after Keith's method,

then dropped in. A large portion of the omentum was treated in the same way. Her recovery was prompt. Highest temp., 99·8. Present Drs. Rahauser and Patton, and Dr. Emery, of Venetia, Washington Co., Pa. Recovery rapid.

Case 4. Feb. 2., 1884. Miss B. T., aged 24. Supra-vaginal amputation of the uterus with both ovaries and tubes for constant hysteralgia with intolerable dysmenorrhœa. The cervix uteri was transfixed above the vaginal attachment, and the uterus was cut off, the end was hollowed out a bit and the edges stitched together with carbolized silkworm-gut suture, cut short. The pedicle was left in the pelvic cavity. Present, Dr. Rahauser and Drs. Akerman and Baguley of Wheeling. The patient recovered nicely. Highest temp. 101·6 on sixth day. Recovery rapid.

Case 5. Feb. 20, 1884. Miss P., aged 39. Supra-vaginal amputation of uterus and ovaries for large fibroid tumors. The tumors were four in number, no pedicles, three subperitoneal, one interstitial occupying the neck above the vaginal attachment. The cervix was transfixed and tied off below this small tumor and everthing above the ligature was removed. The uterus and tumors weighed five pounds. The end of the stump was stitched and the stump dropped in. A drainage tube was introduced at the lower angle of the abdominal wound. Present, Dr. Rahauser, Dr. W. L. Stone of Pittsburg, and Dr. W. A. Findley, of Altoona, Pa. The patient recovered promptly

Case 6. March 28, 1884. Mrs. L. K., aged 28; has never menstruated, is very feeble. On right side multilocular ovarian cyst, broad ligament spread out over it. The cysts were emptied and removed with the uterus just above the vaginal junction. After fixation and firm ligation of the cysts and cervix separately, both pedicles were divided with Paquelin's cautery. The cyst walls and uterus were firmly attached, and I preferred hysterectomy to leaving a wounded fundus uteri. A cystic ovary was found on the left side, the cyst being as large as a cocoa nut, and removed, the pedicle being divided with scissors and touched with the cautery. The pedicles were left inside, and a drainage tube inserted. This was double ovariotomy for cystic ovaries, and supra-vaginal amputation of the uterus at the same operation. Present Drs. Rahauser and Stone of Pittsburg, Dr. McCune of Seeterville, Pa., and Professor Gill of Wooster Medical College, Cleveland, O. The recovery of this patient was slow, but good. She required great care and stimulation for eight or ten days after the operation. She went home seven weeks after the operation, and is now reported in good shape. The weight of the material removed amounted in all to ten or twelve pounds. The drainage tube was left in for fifty-four hours, and gave exit to four fluid ounces of bloody serum.

Case 7. April 2, '84. Mrs. A. S., age 28, measured 54 inches around the body; face and extremities emaciated; breathing difficult. An incision 15 inches in length was required. The tumor was multilocular, and a

large trocar failed to evacuate any contents. The cyst was cut into with scissors, and the hand and arm introduced. Thirty pounds of colloid and gelatinous contents were thus removed, and the cysts weighing sixteen pounds were then removed from extensive adhesions to the adbominal walls, intestines and liver and delivered. Many ligatures were applied, the pedicle was tied, severed with the cautery, and dropped in. Hemorrhage persisted from the surface of the liver, which was stripped of peritoneum for a distance of several inches in length and an inch in width. This entire surface was cauterized with Paquelin's cautery. A drainage tube was left in. Present, Drs. Stone, Bane and Sterritt. Her recovery was rapid. Highest temperature 101·2°, normal on the fourth day. Sent to her own residence in the city on the fifteenth day after the operation. She is now in fine health. The weight of cyst and contents was forty-six pounds. The woman was small.

Case 8, May 12, '84. Mrs. A. D., aged 47, very large; much free fluid in the abdomen, and a large solid tumor, very sore on pressure. A long incision let out the tumor, which was free from adhesions and sprang from the left ovary. The pedicle, very short, and containing enormous blood-vessels, was tied with silk and dropped in. The peritoneum was very red, extensive chronic peritonitis being present. Quite two gallons of ascitic fluid was removed, a drainage tube introduced and the wound closed. The flow from the wound was free, and during the two days following, nearly a quart of bloody serum was discharged; during the next thirty-six hours very little serum came away.

At the beginning of the fourth day her condition was excellent as to pulse and temperature, but she complained of pain over the left lung; it hurt her to breathe deeply. The surface was painted with iodine, and one eighth of a grain of morphia given hypodermically. At 9 a. m. next day her temperature was 99°, and pulse 114. She had nausea, and vomited. At 1 p.m. she died, with symptoms of embolism of the left pulmonary artery.

At the post mortem her peritonitis was found cured, her abdomen was free from bloody serum. We were not permitted to examine her lungs or heart. At the operation Dr. Stone assisted, and Dr. Feindenburgh was present. The tumor proved to be a sarcoma.

Case 9, Mrs. M. G., aged 51, multilocular ovarian cyst, recently had peritonitis. Extensive parietal adhesions were encountered. The pedicle was very short; was tied and dropped in. A drainage tube was left in. For several days bloody serum escaped. Her recovery was rapid, and she went home on the fifteenth day after the operation. Lived near the hospital. There were present at the operation Dr. Stone, assistant, Dr W. I. Lanfitt and Mr. George Keith of Edinburgh, Scotland.

Case 10, June 5, '84. Miss E. M., aged 22. Multilocular ovarian cyst; no adhesions; very broad pedicle. Treated with cautery-clamp after the

method of Keith, and dropped in. As the pedicle was very large a double ligature was applied before severing it with the cautery. Her recovery was rapid. The incision was only two inches long, and healed in a few days. She was taken to her residence near the hospital on the 12th day after the operation.

Present Dr. Stone, assistant, Drs. Langfitt and Mundorf and Mr. George Keith.

In all my operations I have but one assistant, and permit but few spectators. I am not mixed up in general practice, neither is my present assistant, Dr. Stone. My former assistant, Dr. Rahauser, very superior in such work has kindly stood aside on account of his general practice. Zymotic disease practice and abdominal surgery in my judgment are not compatible. My building has proved too small for abdominal and pelvic surgery. That I might indulge in cervical and perineal surgery, as well as in the less profitable abdominal work, I have erected a separate building on my lot, over one hundred feet from the present building. This new building is especially adapted for abdominal work, and will be used exclusively for this purpose. It will be completed within a fortnight.

TAKE YOUR FORCEPS WITH YOU.

By H. V. Swerингen, A. M,, M.D., Fort Wayne; Ind.

Ye have heard it said by those of olden time, thou shalt leave thy forceps at home when called to an obstetric case. But I say unto thee, nay! a thousand times nay! take them with thee always, particularly to primiparæ cases.

The forceps is a grand instrument, a God-given instrument; it has saved the life of many a woman and many a babe; its neglected employment has caused many a woman's death and many a babe's. And yet, I have heard intelligent, gray-haired physicians publicly protest against their use, and advise the young practitioner to leave his forceps at home when going even a considerable distance to attend a confinement, for fear that if he carried the instrument with him he would use it unnecessarily. This is really amusing. A few years ago, however, at a meeting of the Indiana State Medical Society, I actually heard this kind of logic seriously promulgated. If it had not emanated from men who, in medicine generally, are sound and abreast with the foremost of the profession, men who have grown old in the service of the healing art, and whose council in most instances is wise and timely, I would have opposed in no unmistakable terms.

The physician who does not know how or when to use the forceps, should not only leave *them* behind, but *himself* also. He has no business at the bedside of the parturient woman. It will be noticed by the foregoing that I have employed both the singular and plural numbers

in speaking of the instrument. My reason must be obvious,—I don't know which is correct.

The importance of having forceps conveniently at hand was this day (May 12th, 1884) so emphatically demonstrated that I cannot resist the temptation of reporting the case somewhat in detail:

Early this morning I received a telephone message to go to No. 155 High Street, to attend a case of confinement. Ascertaining that the patient, Mrs. Flickering, was a primipara, I picked up my forceps and a bottle of Squibb's chloroform and proceeded hither. When I neared the premises, I was called into a neighboring house, where I was requested to remain until Dr. ——, a homeopathic physician, who, unknown to me, had been previously engaged and was already in attendance, would leave the house, the patient and her friends having become dissatisfied with his services.

The doctor was now, by the husband, paid for the time he had been in attendance; he then left; in passing the window where I sat, I noticed his lips moving as if in prayer; probably he was repeating silently some familiar bible texts memorized while yet a Sunday school student.

I then entered the house, heading a small procession of the neighboring women, all of whom seemed to be in a condition that would, ere long, prove a small harvest for some accoucheur if he could capture them all, a fact no doubt known to the departing doctor, and which served to intensify his spiritual condition.

The lady then in labor is young, probably not more than nineteen years of age, a brunette, and of a very nervous temperament; the vagina was extremely sensitive to the slightest touch, and so small that I was permitted to introduce the index finger only, in my examination, which latter disclosed a natural presentation, but a rigid os, dilated only to the size of a nickel; she had vomited several times.

I informed the friends that there was no need of me remaining at present; prescribed some chloral and left, promising to be back in two hours. When I returned, was informed that she vomited every dose of the medicine and everything else taken into her stomach. Feeling quite confident that all this vomiting must have relaxed the os, examining again, I discovered an almost total dilatation, the membranes ruptured with very little escape of water, and a considerable descent of the head.

She was now, however, unusually nervous, irritable, cross, and unable to remain a half-minute in any position. I now gave her a rectal dose of the chloral which, for a short time only, had a very happy effect. I now for the first time, noticed occasional clonic contractions of her arms and back; they may have occurred elsewhere; she said that she was being "jerked to pieces." Calling the friends to one side I informed them that they might be prepared for a most violent fit at any moment. I was greatly tempted to use the forceps at once, but concluded that she

might get along without obliging me to resort to this measure. I was now informed that before my arrival she had several of these "spells of jerking," as they were termed, and, upon calling the doctor's attention to them, he replied: "Oh, they are nothing, you must expect them," and laughed at their fear of them. This reply and his manner of expressing it, proved to be the "last straw which broke the camel's back"; the women in attendance knew better, and were determined to have a change of physicians.

We had not long to wait until occurred one of the most fearful convulsions I ever witnessed; it would have been much more severe had I not, as speedily as possible, got her into the forceps position, administered the chloroform as rapidly as she could inhale it, for the control of the convulsion only, as she was of course deeply insensible, and delivered her immediately, of a living, healthy boy. I took away the placenta, changed her position and waited until the effects of the chloroform began to subside, when she went into another less severe convulsion, which was again immediately controlled by the chloroform.

To be brief, she has had at this writing, ten hours after delivery, no return of the convulsions, and every indication points to her speedy recovery. The forceps, in my opinion, saved her life and that of her babe.

Now, in contrast with the foregoing case, I desire to relate another. On Tuesday morning, December 11th, 1883, a young man called to take me three miles into the country, to see his sister who, he said, was in confinement, and had, before he started, seven spasms. Intending to take a train for Indianapolis in four or five hours. I insisted on his getting some other physician. He assured me that he would bring me back in time to make the train. I went, taking my forceps and chloroform as usual. On our way out, I wondered why he did not drive faster; thought he could not care much for his sister's welfare. Arriving, on entering the room she had just gone into another convulsion which the women in attendance said was her eleventh. I did not stop to give her any chloroform, but, getting her into position, delivered her at once with the forceps, of a child (female) which is still alive and healthy. Two minutes were hardly occupied in its delivery. The friends informed me that she had not been conscious since her first spasm. After delivering the placenta and getting her back into her original position, I administered the chloroform, which controlled the convulsions as long as she was under its influence. I was now about to bleed her, but her pulse did not seem to call for depletion and her flow was quite sufficient. I now learned that she was unmarried, a fact I had already suspected, that she was about seventeen years old, and had by tight lacing and hard lying deceived her parents and friends up to within a few weeks of her confinement; that she persisted even after her labor had commenced in

remaining tightly laced and in declaring her innocence, and would not be persuaded to unlace herself until after her sisters would leave her bedside and the lights of her room were extinguished. Several old ladies of the neighborhood, relatives of the family remained with her during the entire night, thinking that if everything would pass off all right publicity might in a great measure be avoided. After her seventh convulsion, however, they deemed it wise to send for a physician whose coming and the results thereof are partly above given. I requested the attendants to keep her partly under the influence of chloroform and send for their family physician, as it was impossible for me to remain, expressing at the same time the opinion also that she would die.

On my return home, the brother informed me that the reason he did not drive faster going out was because he was in hopes by his delay "the d——d bastard would 'die a bornin' and himself and family thereby be saved the disgrace it would otherwise occasion." Upon my return from Indianapolis, a day or two later, I saw in one of our city papers a funeral announcement of my patient.

Now, I verily believe, that, if she had been delivered *promptly*, with the forceps, immediately upon or before the appearance of her first convulsion, her life would have been saved. I close as I began, *take your forceps with you always.*

SOME OBSERVATIONS IN THE TREATMENT OF PUERPERAL ECLAMPSIA BY NORWOOD'S TINCTURE OF VERATRUM VIRIDE.

By HENRY W. BROWN, M.D., Hillsboro, O.

In the June number of the OBSTETRIC GAZETTE there appears the reports of a number of cases of puerperal eclampsia, followed by a lengthy and exhaustive discussion by some of the most distinguished men of the State. The discussion covered the grounds of nearly every plan of treatment except that of large doses of Norwood's tincture veratrum viride. It is a matter of surprise to me that it never finds a respectable place in any society discussion, when I am so thoroughly convinced that it is the very best single remedy of all of them, and so absolutely *harmless*, so far as its toxic effects are concerned, in puerperal eclampsia.

Not wishing to take enough space to report in full my cases, I desire to furnish a synopsis of some cases that have come under my care during the last four years, illustrative of the efficiency of the remedy in each case. First, however, I will mention my first case, which was treated by other means and died.

CASE 1. September 3d, 1880, I was called in haste to see Mrs. R. in consultation with Dr. E. C. Sharp, of Williamsburgh, O. Upon my arrival I was informed by the Doctor that the woman (a primipara, aged

about twenty-five), had been delivered the night before of a healthy child; had done well all day, until about three o'clock in the morning when she was taken with a hard convulsion, which was repeated in twenty or thirty minutes, and continued so until after eight when I saw her. We gave her chloroform by inhalation to almost complete anæsthesia at times, but no good effect. We gave her morphia hypodermically, watching every effect of the medicine and repeating as the convulsions recurred, but to no effect. She went on from bad to worse and died on the third day, after taking incredible amounts of morphia, chloroform, bromides, etc., and after having sixty-three hard convulsions.

CASE 2. April 17, 1882, Dr. Lancaster, of Mt. Oreb, Ohio, delivered Mrs. B., aged twenty, primipara, of a healthy child at one o'clock p.m. All went well with the exception of a slight headache, for which bromides were prescribed, when she was taken with hard convulsions recurring every twenty to thirty minutes. Chloroform by inhalation was used, and bromides and chloral freely, but the convulsions continued with unabated severity until half-past seven o'clock, when I saw her. The Doctor had also given her some tincture that he procured from his druggist for Norwood's tincture veratrum viride, but, if it was the tincture at all, it was certainly a very inferior article for it was almost as clear as water. I had some fresh tincture with me, so we began administering it in doses ranging from forty to ninety drops every thirty to forty minutes. The effect was just like magic. The pulse came down rapidly from 130 to 70. She became thoroughly relaxed and sweat profusely. She vomited some once or twice, after which we would repeat the dose immediately. With the exception of one or two slight convulsions, after we began the administration of the drug, she had no more trouble and made a rapid and complete recovery.

CASE 3. January 8th, 1884, I was called in consultation with Dr. C. Matthews to see Mrs. C., who had been delivered, just a few minutes before my arrival, of a healthy child. She had two convulsions before delivery and one after, the last of which she had not fully recovered from when I saw her. We gave her from thirty to fifty drops of Norwood's tincture every few minutes. The effect was, as in previous case, perfect relaxation, vomiting and no more convulsions.

CASE 4. I was called to New Boston on February 12, 1884, to attend Mrs. L., who had been in labor two hours when I arrived. She progressed slowly and after twelve hours rather hard labor she was delivered of a living child. Before the feet had been expelled she was taken with one of the severest convulsions I ever witnessed. She bit her tongue frightfully before I could prevent it and turned very black in the face. It seemed to me she would never breathe again so long was it before she revived. I delivered the afterbirth as soon as possible, put on the bandage, gave her seventy-five drops of Norwood's tincture veratrum

viride, and sent for Dr. Spees, of Hillsboro. I had hardly done this before she had another convulsion, equally as severe as the previous one, and before she regained consciousness. Just as soon thereafter as I could pry her teeth apart I gave her ninety drops more of the tincture, but she had another convulsion soon after and continued having them as before. I continued giving the veratrum at shorter intervals and increasing doses until she vomited and relaxation took place. Her pulse rate, which was very high, had been reduced to fifty, and by the time Dr. Spees arrived she had had no convulsion for two hours and was sleeping quietly. He recommended the continuation of the medicine in smaller doses so as to keep the pulse below sixty, which I did during a period of several hours, after which she made a good recovery without any further treatment.

CASE 5. March 10, 1884, I was called to Lynchburg, Ohio, by Mr. L. to see his wife in puerperal convulsions. His first wife had died two or three years previous of the same disease under the chloroform and morphia treatment. As a matter of course the family were very much alarmed at the second case. When I arrived I found the case in charge of Drs. Kleckner, of Lynchburg, and Marsh, of Dodsonville. She had had some three or four convulsions and was very restless and nervous, barely comprehending anything that was said to her. She had been in labor five or six hours with no progress. The os was not dilated at all but pains were severe. I recommended ninety drops of Norwood's tincture, which was given under protest by Dr. Kleckner. This was repeated at intervals of thirty minutes only in smaller doses (about sixty drops each time) until we gave four or five doses when she vomited and was thoroughly relaxed. In our anxiety concerning the convulsions we had forgotten to ascertain whether or not the os was dilated. I made an examination and, to my surprise, the head was presenting in first position low down. We delivered immediately and our patient went off to sleep with pulse down to fifty. She needed no more treatment and is well and hearty now.

CASE 6. May 6, 1884, my brother, Dr. R. A. Brown, of New Petersburgh, telephoned me to see a case of puerperal convulsions with him, which had occurred several days after delivery. It being a distance of fourteen miles, and as I had to drive through, I did not see her for some two or three hours after receiving the message. Upon my arrival I found she had had seizures every thirty to forty-five minutes, until she got under the influence of frequently repeated teaspoonful doses of Norwood's tincture of veratrum viride, at which time she vomited freely, pulse came down, and, as she was very anæmic, became very weak, could hardly raise her fingers, but she made a good recovery and is now enjoying good health.

The above is not an extensive field of observation, but it will certainly do to prove the efficiency of the remedy in these cases and show that the

fears entertained by the profession as to its deadly poisonous effects, when administered in large doses, is wholly groundless.

SURGERY IN WESTERN PENNSYLVANIA.

By Wm. C. Bane, M.D., Cannonsburg, Pa.

Pittsburg, the second largest city in Pennsylvania, has never been much recognized as a medical center. A large number of her citizens and those living near her, have long applied for skillful treatment in Philadelphia and New York. The Pittsburg Medical Society has always opposed a medical college, and was the first to insist upon a preliminary examination of students. This action has kept the Iron City from receiving that patronage which students contribute to the place where they attend lectures. While she has sacrificed many opportunities in her devotion to a higher medical education, she has reason to be proud of many of her physicians and surgeons. Some of her dead ranked with the leaders of the art, but never has she been stronger than at present in the number of her excellent surgeons, all, with one exception, Dr. A. M. Pollock, young men.

In general surgery she has six or eight very able men; notably among them is the surgical staff of the Western Pennsylvania Hospital, Drs. McCann, King, LaMoyne and Murdock. In special surgery she is ably represented in ophthalmology by Dr. Lippincott; in throat surgery, Dr. Daly probably has few superiors in the country; in abdominal surgery, and in all the surgery which relates to women, Pittsburg is represented by Dr. R. S. Sutton, who has a private hospital for the work.

On April 21, 1884, it was my pleasure to be present at a laparotomy by Dr. Sutton at his hospital, which case it is my object to report to your journal.

The patient, Mrs. A. M. S., æt. 28, was a small, delicate woman, with a large multiloculor cyst of two years' growth. She measured 56 inches in her greatest circumference. Her breathing was very short and difficult. Locomotion was accomplished with much distress. She was anæsthesized, lying on her left side, with a mixture of alcohol, chloroform and ether. She was now placed in a half-sitting posture, on her back, the abdomen was covered with the conventional rubber sheet, with a hole in it; this in turn was covered with clean towels wrung out of hot water. The instruments lay in hot water at the right hand of the operator. An incision 12 inches in length laid the tumor bare. A large trocar was plunged into it, but no fluid escaped. He laid the trocar down, run two fingers in the trocar hole, and tore a large opening in the tumor; through this he introduced his hand and soon broke down and emptied the cysts, until thirty pounds of colloid and very thick fluid had accumulated in the tub. He now delivered the cysts, a great mass which

weighed sixteen pounds. In about fifteen minutes from making the abdominal incision, the entire tumor, forty-six pounds in weight, was in the tub under the operating table.

The pedicle, divided and held by heavy clamp forceps, was now ligated with silk and dropped in, the abdominal cavity was sponged out, and six or eight ligatures were applied to bleeding points along the intestines. Blood was discovered flowing from high up, an examination revealed the edge of the liver for a distance of five inches and an inch in breadth bleeding freely, the cyst having been torn from this surface. This surface was first treated by sol. ferri perchloride, but the bleeding persisted until stopped by the application of the cautery. The cavity was again cleaned out and all bleeding points carefully secured. A drainage tube was placed in the lower angle of the wound, which was closed with 26 silk worm gut sutures. The patient was on the table one hour. There was no spray, no carbolic acid on the instruments or in the sponge water, but everything about the operation and operating room showed that Dr. Sutton believed that cleanliness is the secret of success in surgery.

From Dr. W. L. Stone, the assistant, I learn that this patient recovered promptly, and left the hospital on the fifteenth day after the operation. Her temperature, never above 101·2°, became normal on the fourth day after the operation. From the same source I learn that this is the seventh abdominal section performed in the hospital since it was opened in September last, and that the entire number have recovered.

The hospital is small, located on high ground, and is admirably adapted to the purpose. If Pittsburg, with her many good hospitals, and good physicians and surgeons, was better known to the profession, she would receive what she merits, viz.: a wider patronage from the profession.

Society Reports.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Thursday, May 1, 1884.

The President, R. A. CLEEMANN, M.D., in the chair.

Dr. Henry Bates, Jr. read a report of a case of

CYSTIC LEIOMYOMA UTERI,

the fluid of which contained the *Drysdale Corpuscle*, and other characteristics of typical ovarian cystoma. The early history of this case, owing to the inability of the patient to state with precision a few minor details, is somewhat incomplete, yet sufficient accuracy is available to supply a clear, unequivocal clinical record, and distinctly demonstrate that the Drysdale corpuscle, when found in considerable number in fluid derived from the abdominal cavity, is not pathognomonic of cystoma ovarii.

Mrs. L., æt. 51, housewife, a mother, noticed, four years prior to admission to the Philadelphia Lying-in Charity Hospital, a lump in the lower part of the abdominal region. The menopause had not yet occurred. The tumor was round, painless, and occasioned no inconvenience. Its development was comparatively slow, and not until it had attained large dimensions did it occasion constitutional derangement. When admitted, the patient was markedly asthenic, and suffered from mechanical dyspnœa, gastric irritability, subacute proctitis, and pyrexia, the temperature ranging from 99° to 100·5°.

The facies ovariana and the peculiar atrophy of the soft tissues of the supra-thoracic region, so constant an attendant upon ovarian cystoma, were present in conspicuous degree. The notes of measurement are, unfortunately lost, but an estimate of its size can be formed when it is remarked that the tumor completely occupied the abdominal cavity, everting the xiphoid cartilage and inferior ribs, bulging far over the lumbar region and extending over the pubes down and between the thighs. The circumference at its largest portion was about fifty-one inches. The superficial abdominal veins were conspicuous, and the cellular tissues from the mammary zone to the feet very œdematous. Palpation and percussion detected and revealed signs of ovarian cyst. The fluctuation was more perceptible in the longitudinal than transverse diameter. In the subhepatic region a decided resistance to pressure was noticeable, dependant upon a thickening of the cyst wall. This mass was attached to the liver at the outer two-thirds of the inferior border. At the inner third there intervened a space which emitted a percussion tympany, the note being that of colic resonance. The urine afforded negative evidence. As the anæsthesia was so profound, it was deemed advisable to tap the cyst, in order to obtain an opportunity of improving the general strength and rendering ovariotomy bearable. Dr. Albert H. Smith, who had charge of the case, tapped, employing the ordinary curved trocar and canula used in tapping per rectum the urinary bladder, and withdrew twenty-seven pints of a dark, muddy-brown grumous fluid possessing a neutral reaction, specific gravity 1018, and containing blood and paralbumen. Microscopically I found red blood corpuscles, leucocytes, endothelium in varying degress of retrograde metamorphosis, *i.e.*, the corpuscles of Bennett, Munn and Gluge; the ovarian cell of Drysdale, cholesterine and amorphous detritus. It did not coagulate spontaneously. These microchemical properties, coupled with the physicial signs, determined a diagnosis of ovarian cyst. The grumous character of the fluid, and the existence of the sub-hepatic mass inclined to the belief that we were dealing with a cyst in which carcinasis had become established, and that either metastasis to the liver had occurred, or there co-existed carcinoma hepatis. The idea of ovariotomy was abandoned and analepsis instituted, with the effect of improving her general condition sufficiently to admit of

her being removed to her home, where she remained under the care of Dr. L. Brewer Hall. In about five months the tumor had refilled, and during my absence, Prof. James B. Walker, at Dr. Hall's request, tapped the second time. The fluid was clear, and presented the appearance of ovarian fluid.

In the winter of 1882 I tapped a third time, employing an aspirator. The gentleman assisting me inadvertently applied the exit nozzle of the air pump to the vacuum jar, and when the trocar was introduced, there occurred an inflation of the cyst. The air apparently inflated a series of variously sized cysts that were arranged circumferentially and emitted percussion notes of different pitch. From this circumstance, which occasioned no evil consequences, we concluded that there existed a number of small cysts communicating with the principal. As the evacuation of the fluid progressed, the umbilical region sunk in, disclosing a circumferential mass, presenting the appearance of a wreath, as it were, underlying the abdominal parieties. This ridge could be firmly grasped, and moved to a limited extent. This peculiarity determined me to carefully examine the fluid. I also had Dr. Formad examine it, and he pronounced it ovarian. The class at the University of Pennsylvania was supplied, and the ovarian cell of Drysdale demonstrated.

The cyst refilled more rapidly, and I tapped a fourth time, removing a large bucketful of clear fluid, containing the same corpuscle in greater number than the previous specimens; large flakes of coagulated lymph were also evacuated. The circumferential mass had undergone great development, as had also the subhepatic induration. The accumulation of fluid was more rapid, and the deterioration of health steadily progressing. Death terminated suffering about six years after the first manifestations. During the last days of the patient's life, Prof. Walker, in the absence of Dr. Hall, was in attendance. His letter details the mode of death and results of the autopsy:

"Mrs. L. died on the Sunday night after your departure. Her bowel "trouble rapidly disappeared, but the symptoms of cerebral anæmia "deepened, with hallucinations and convulsions until death.

"At the autopsy the tumor was found to have membranous walls over "an area of nine square inches above the naval, in the middle line, elsewhere the cyst wall was thick as per sample. In some localities, notably in the hypochondriæ, the wall was quite thick. Firm attachments "existed over the anterior wall of the sac with the parietal peritoneum, "and the intestines were carried far up under the liver and stomach, and "were attached to the tumor. The liver was also attached. The entire "abdominal cavity was occupied with the tumor, and it dipped into and "occupied the pelvis. No attachments existed at the sides or behind. "The uterus was forced downward. One ovary, the right, was normal, "and attached loosely to the pelvic brim. The other is presumably occu-

"pied by the tumor. The cavity of the tumor was occupied by a brown-
"ish, gelatinous fluid, resembling soft soap. It was transparent, but had
"a sediment consisting of ditritis from the inner wall of the sac. There
"was but one cyst, and the entire interior was similar in its lining being
"apparently undergoing erosion. The contents of the cyst measured
"over a Yankee bucketful. As the tumor was too immense to even con-
"template removal, and as the variably thick wall was everywhere sim-
"ilar, save in the pelvic portion, which was darkened from hypostatic
"congestion, I removed the uterus and the portion of the tumor imme-
"diately surrounding it, extending the section through the cyst wall."

(This specimen was presented to the Society.)

Sections for microscopic study were prepared from different portions of the cyst wall, and were all demonstrative of leiomyoma. Those from the subhepatic portion resembled spindle-celled sarcoma, but were clearly differentiated by the elongated nuclei and want of sarcomatous relationship of cells to capillaries. The identity of the clinical phenomena of this neoplasm with those of ovarian cyst is a matter of special attention. In the early stage a marked peculiarity consisted of the subhepatic enlargement and induration; a morbid resistance to pressure noticed in the inferior lumbar regions after the first tapping and attributed to the œdema, is now seen to have depended upon a thickening wall which at that time was insufficiently developed save in the hepatic region, to have attracted special attention. That all doubt regarding the nature of this neoplasm may be removed, special attention is directed to the left ovary, which has undergone marked atrophy, and is to be seen in the specimen. I submitted some specimens to Dr. Formad, who pronounced them ovarian.

The origin of the cyst from the fundus uteri is evident upon examination. With these facts before us I think it is conclusively proved that the ovarian corpuscle of Drysdale, while a valuable aid to diagnosis, does certainly not possess pathognomonic value.

DISCUSSION.

Dr. Drysdale regretted that Dr. Bates had not sent him a specimen of the fluid removed from this tumor, especially as he had had more than one opportunity of doing so. While having the highest regard for the opinion of the gentleman who examined it, still, so many errors have been made in these investigations that it would have been a satisfaction to him to have examined it himself. But apart from this regret he considered it by no means proven that the cyst in question was not ovarian. The portion of the tumor left attached to the uterine wall in the specimen resembled a closely adherent ovarian cyst, such as he had met with repeatedly. The little mass lying close to the uterus, described as an atrophied ovary, did not present any resemblance to an ovary, nor did it occupy the usual position of that body. In the description no reference had been made to the color of the tumor, which has an important diagnostic value; the

uterine fibro-cyst being usually livid or purplish in color, while the ovarian had a white, pearly-blue. It was especially in cases like that of fibro-cyst of the uterus where the importance of the ovarian cell in diagnosis was well marked. In his investigations of these tumors he had never met with the cell which he had described as ovarian. Mistakes were very easily made in the differential diagnosis of such tumors, and, in fact, in many cases, the diagnosis could not be established except by the examination of the fluid or by opening the abdomen. For want of this examination he had seen Spencer Wells make the abdominal section to remove a tumor which he had diagnosticated as ovarian, but which proved to be uterine. Dr. Marion Sims had sent him on three different occasions, and without telling him that they were from the same patient, specimens of fluid which he thought were ovarian, obtained from a cyst in the abdomen. Dr. Drysdale assured him that the fluid was not ovarian, but after the examination of the last specimens, Dr. Sims, still doubting, determined to operate, and found an uterine fibro-cyst. The history and all the characteristics of the tumor described this evening were ovarian, and the specimen and autopsy were not sufficient to establish the diagnosis of uterine cyst.

Dr. B. F. Baer remarked that the specimen seemed to be a section of a fibroma arising from the uterus, but it is too small to be satisfactory or to prove its origin. His personal experience has taught him the diagnostic value of the Drysdale corpuscle. When Dr. Formad reports finding this cell in the fluid removed from an abdominal tumor he feels strengthened in his diagnosis of ovarian cyst. He has not trusted to the cell alone, but has been greatly influenced by its presence or absence in making up a diagnosis in doubtful cases. In every instance in which Dr. Formad has reported finding the ovarian cell, operation has proved the tumor to have been of ovarian origin. He would like to ask Dr. Drysdale if he still considers the cell pathognomonic.

Dr. Drysdale still believed in the pathognomonic value of the ovarian cell. In his investigations he had met with but one exception to the rule and that was in renal cysts. To prove that the cell could be relied on to establish a diagnosis he would give one or two instances where it was impossible to do this except by its aid. In a review by Dr. Harris of the Transactions of the American Gynecological Society in the *American Journal of Medical Sciences* will be found this statement: "On one occasion Prof. D. Hayes Agnew gave Dr. Drysdale a fluid for examination, in which he found the characteristic cell. Upon stating what he had found to Dr. Agnew, he was told that the fluid had been taken from the abdominal cavity; upon which he immediately said that the fluid must have escaped from an ovarian cyst for it was ovarian. In this he was correct, as the cyst had a small hole in it, as if made with a punch, and the fluid had escaped as claimed."

In another case Dr. Drysdale received a letter from Prof. Matthew D. Mann, of Buffalo, N.Y., with a specimen of fluid, consisting of eight or ten drops, which the doctor stated was all that he could obtain by aspiration. The tumor had been diagnosticated by other surgeons as one of uterine fibroma, and consisted of a large solid mass which filled the pelvis and abdomen as high as the umbilicus. The history and symptoms all pointed to a uterine fibroid and the patient was in such a precarious condition that an exploratory operation was considered unjustifiable. An examination of the fluid by Dr. D. showed the presence of the ovarian cell. This determined Dr. Mann to operate. He found two ovarian tumors, which he removed successfully and the patient recovered, "without the microscope no certain diagnosis could have been made except by resorting to an exploratory incision." These cases, and he could give many others like them, were sufficient to show the diagnostic value of the cell.

Dr. Beates remarked that it was a matter of extreme regret to him that Dr. Drysdale did not have an opportunity of examining the fluid, it was due to the fact that the neoplasm was regarded as ovarian and the specimens of fluid were not preserved. At the autopsy the growth was presumed to have arisen from the left ovary and none of the fluid was kept. Later study of the specimen disclosed the amygdaloid mass, situated in an atrophied membranous structure, closely approximated to the uterus. The microscopic examination of this determined its ovarian character to the mind of Dr. Formad, which conclusion dissipated a doubt in my mind and confirmed my belief of its being the left ovary. I thoroughly appreciate the strong probability of error liable to occur in positively diagnosticating by differentiation the Drysdale corpuscle from similar bodies, as the pyroid body of Lebert, but the fact that treatment with acetic acid only had the effect of rendering the whole corpuscle very slightly clearer and disclosed no nucleus; that ether added to the fluid and the mixture thoroughly agitated for several minutes had the effect of simply rendering the corpuscle paler, convinced me that the bodies were the corpuscles in question. There is, by very extended experience, developed a capacity to differentiate by a varying degree of opacity. Dr. Formad believed these corpuscles to be those of Drysdale. The striking phenomenon, if this be an ovarian cyst, is in the fact that primarily it was purely cystic, typically so, and that during the last year of its existence the cyst-wall throughout its posterior seven-eighths assumed a myomatous development. If this did not occur, the myomatous wall must have originated at the fundus uteri and gradually permeated the cyst. Either of these processes is almost incredible and certainly exceptional to known clinical facts. The true uterine origin must not be forgotten. That a proper conception of the tumor may be formed it should be compared to a large pumpkin with a wall varying in

thickness from one to three inches. For an area of about nine square inches at the umbilical region the ordinary cyst-like structure formed as it were a drum-head. This wall is not fibromatous but purely myomatous. Dr. Goodell had seen this patient and diagnosticated the tumor as ovarian.

Dr. B. F. Baer exhibited a specimen of

HYPERTROPHIED UTERINE MUCOUS MEMBRANE.

R.H., æt. 30, married twelve years, sterile, puberty occurred at the age of twelve; slight dysmenorrhea from the first, and since her marriage the difficulty has been increasing, so that during the last few years the pain has been very severe. The menstrual flow, which has always been rather profuse, especially since her marriage, has for more than a year been irregular in time and quantity; sometimes it continues two weeks very freely when she would be so prostrated as to be compelled to remain in bed to regain strength. She complained of a severe, sharp pain in the region of the left ovary, radiating to the groin and anterior part of the thigh, and to the præcordial region and side of the head to the top-head. She had great dragging in the pelvis and pain in the sacral region. During her periods the mammary glands would swell and become very tender and sore. Coition had been rendered almost intolerable on account of pain during the act and because it increased the pain in the left ovarian region and induced a sensation of nausea and faintness. She had such dread of sexual congress that an interval of months would sometimes elapse between the acts. Her weight had decreased from 146 to 117 pounds and her appetite and digestion were poor.

Examination showed the cervix uteri to be near the vaginal orifice somewhat elongated and conical. The os was patulous, the body of the uterus very much hypertrophied and retroverted. The left broad ligament was contracted and the corresponding ovary prolapsed, larger than normal and very tender to pressure. The sound indicated a uterine depth of three and one-half inches and the cavity was large and soft. The organ was mobile. Ether was administered, the cervix dilated by means of Ellingen's dilator and the endometrium was carefully curetted, removing a large amount of the most enormously hypertrophied mucous membrane. Nitric acid was applied. Under a regulated diet, with rest, complete relief followed with freedom from hemorrhage and pain.

DISCUSSION.

Dr. W. H. Parrish would like to hear the result in Dr. Baer's case after the lapse of three or four years. Two or three years ago he had reported before this Society a similar case in which, after dilatation by sponge-tents, he had removed a large quantity of endometric growths, and applied nitric acid. The treatment was followed by an apparent cure, which lasted for some months, after the lapse of which the previous

condition returned. The same treatment, followed by relief and subsequent relapse, has been repeated several times. Good microscopists have pronounced the growths benign. Dr. Goodell has, however, given it as his opinion that it will ultimately become malignant. Dr. Parrish has been gradually coming to the same opinion.

Dr. Beates has treated a woman, aged thirty-three years, who suffers from anteflexion of the uterus, menorrhagia, and granulations of the endometrium. The microscopic appearance is benign. After treatment by means of the curette and nitric acid no hemorrhage occurred for four months, the treatment was repeated, a laceration of the cervix was closed and seven months later the patient became pregnant, abortion occurred at two and a half months, and the granulations and hemorrhages have returned.

Dr. Baer remarked that these cases are very common, they are seen every week at the clinic. They are usually benign, but sometimes become malignant from loss of blood and a run-down condition of the system. Adhesions or some other obstacle to the free return of the venous blood from the uterus may exist, or the ovaries may be diseased, and these causes may bring on a relapse, no matter how perfect the relief may be. In many cases the cause is flexion, the effect is sterility. It is an exaggeration of a purely physiological process. It may be benign in its incipiency, but may become malignant later on.

Stated Meeting, June 6, 1884.

The Vice-President, B. F. Baer, M.D., in the Chair.

Dr. Wm. Goodell exhibited specimens of

Pyo Salpinx and Hydro-Salpinx.

In the former case the lady was unmarried and had suffered from pelvic pains and menorrhagia for several years. Last autumn a tumor was discovered by her physician who deemed it a fibroid of the womb. Early this year her sufferings became so great that she took to her bed. Very large doses of morphia were needed and septic symptoms now set in. After she had been in bed for several weeks Dr. Goodell was called in to see her. The tenderness of the abdomen was now so great that the examination was made under ether. Even then the diagnosis was obscure because she flinched and her recti muscles became tense whenever the abdominal wall was pressed upon. A cyst was discovered but of what nature it was impossible to determine. Dr. Goodell operated on her at his private hospital. The womb was studded with small fibroid nodules, posteriorly it had an out growth as large as a small egg, closely adherent to the womb, to the pelvis fascia and to the intestines was a thick walled cyst of the left ovary as large as the largest orange. The corresponding oviduct was very thick and enlarged to the size of a small sausage. It and

the cyst were filled with a very dark purulent fluid although there was no communication between them. The lower end of the cyst had became necrosed and was so thinned out that it would very soon have given way at that point. On account of the presence of fibroids in the womb the right ovary was also removed. Attached to the fimbriæ of the oviduct were three very beautiful pedunculated vesicles; while two others not yet pedunculated lay in the stroma of the broad ligament. The recovery of the lady was uninterrupted.

In the case of Hydro-Salpinx, the patient was a widow aged thirty-seven, who had been sent to him in order to have her ovaries removed. Severe pain began a week before the menstrual flux, culminating during the flow and continuing one week longer, then fading gradually away. For three weeks out of every month she was confined more or less to the recumbent posture and wholly so during the menstrual week. A tear of the cervix and one of the perineum had been well repaired by two surgeons but with no improvement. Dr. Goodell wishes her at first to try the rest treatment with massage, electricity and graded muscular movements, for he had repeatedly cured cases of this kind through such a mode of treatment. She was however too poor to take this treatment privately and therefore it was performed fifteen days ago, and she is now doing very well indeed. The ovaries as exhibited were much enlarged and showed marked follicular degeneration. From this condition Dr. Goodell thought that nothing short of the operation would have cured her. Attached to one oviduct was a delicate vesicle with a threadlike stem of over an inch in length. In view of the frequency with which they are found he could not but think that these vesicles played some role in the economy, and that they had sometimes a pathological bearing. He had on several occasions met with small post-uterine cysts which burst either spontaneously or under the pressure of an ordinary vaginal examination. Taking advantage of this fact he had quite recently burst one designedly by bimanual pressure. Such delicate cysts, and also those very movable ones which remained small without increase in bulk, he was disposed to attribute to these vesicles. After bursting these cysts sometimes refill. One he had known to burst and refill at least six times before it disappeared. Now small ovarian cysts had in his experience, thick walls, and, further, they rarely remain small any length of time. Dermoid cysts on the other hand often remain stationary for years, but they were generally not very movable, and they also had thick walls.

DISCUSSION.

Dr. Albert H. Smith has found these cases of pyo-salpinx very difficult of diagnosis. He had been present at an operation by Knowsley Thornton upon a case in which the lesion was double and both tubes and ovaries were removed. Rupture had occurred previously and has been followed by peritonitis. The patient recovered.

Dr. B. F. Baer inquired if Dr. Goodell would recommend rupture of cysts arising from the hydatids of morgagni.

Dr. Goodell would consider it good surgery for the purpose of preventing the further growth of the cyst. He had always found the fluid in small cysts to be unirritating.

Dr. Albert H. Smith remarked that Schrœder holds that the fluid of an ovarian cyst is not noxious to the peritoneum. He makes no effort to protect the peritoneal cavity from its ingress during an operation, and yet his statistics show a remarkable success.

In response to a question by Dr. Meigs Wilson. Dr. Goodell stated that the dressing of the wound after the operation was glycerole of carbolic acid with the Lister gauze.

Dr. Goodell also gave the following history of a

CASE OF HYSTERECTOMY.

The woman was unmarried, aged forty-seven. Her monthly fluxes began to be free in 1867. A year ago they became so exhausting that she could not pursue her trade as a seamstress. On April 30th, she consulted Dr. Goodell who found the whole abdomen filled with multiple fibroids of the womb. The cervix had disappeared and the os uteri lay so high up that it was not possible to introduce the sound. The opertion was performed at the Hospital of the University of Pennsylvania on May 22nd on the same day with the preceding case. One out-growth as large as the two fists contained a cavity filled with cheesy matter and was so adherent to the abdominal wall and intestines as to need the knife for its relief. It was possibly the right ovary but he was by no means certain. Kœberle's wire clamp was passed around what corresponded to the neck of the womb but it was as large as his arm above the elbow. The woman's recovery thus far has been uninterrupted. The temperature reached 100° but once. The clamp fell off the 16th day leaving a very deep funnel-shaped pit. He had intended to exhibit the specimen, but it was too bulky to carry and also had become quite offensive. In this case, had he been able to reach the ovaries or to have discovered them he would have removed them in preference to performing hysterectomy; but the firm adhesions prevented the rotation or the lifting up of the tumor hence the ovaries were inaccessible.

Sometimes even when the uterine fibroid can be lifted out of the wound and the ovaries reached, these organs are so embedded in the fibroid, or so drawn out in ribbon-form on the surface of the tumor as to make their complete removal impossible. When however, the ovaries can be removed with safety the operation is a most promising one as he could attest from several most successful cases.

Dr. W. T. Taylor reported the following case of

PARTIAL PLACENTA PREVIA.

Mrs. S., an English woman, aged forty-six years, the mother of ten

children came to see me, in December 1883, in consequence of abdominal pains, headache and vertigo, with a suppression of her menses which she attributed to a "change of life" as she had been irregular for a year past. She also had numbness with tingling in the hands and feet and had not been so affected in any former pregnancy. Consequently she would not believe in her condition until some weeks later when she quickened. In the month of February last she had enlargement of the veins of the legs with edema of the feet and ankles for which she took occasional doses of potassium bromide with a solution of cream of tartar (℥ i. to water one pint) to be taken freely. By this treatment she was temporarily relieved.

On March 27th, she had abdominal pains a profuse hemorrhage which saturated her clothing and greatly alarmed her. On examination I found the os-uteri high up and slightly open. Although the hemorrhage diminished, yet the pains would soon begin. Under the use of equal parts of wine of ergot and solution of sulphate of morphia she began to get easier and in a few days was out of bed and able to resume her house-hold duties; feeling more comfortable, as the enlarged veins were smaller, her feet and ankles had diminished in size and the headache gone entirely. I told her that nature had come to her relief and bled her without my ordering it.

Feeling satisfied that this was a case of placenta previa and that there was no immediate danger, I concluded the most prudent course was to let nature alone and wait until labor began. She had no more trouble until May 10th, when she passed a large clot of blood and complained of slight pains in the abdomen, these occurred occasionally for two days when the membranes ruptured and a sudden gush of water followed by a flow of blood indicated that labor had begun. On examination I discovered within the os a spongy, ragged, bleeding mass of tissue which was recognized as the placenta; with each pain the flow of blood increased as the cervix dilated. Sweeping my index finger around within the mouth of the womb, as far as I could reach, to detach the placenta from the uterine walls and assist the first stage of labor, I felt the fetal head beyond.

To arrest the bleeding, which, if it continued, would exhaust the mother and destroy the child, I plugged the vagina completely with strips of old muslin well saturated with lard and waited patiently for the os to dilate and the head to advance, giving at the same time occasional doses of quinine and wine of ergot as a tonic and stimulant. In about an hour the advancing head had expelled a part of my tampon and on removing the remainder I found that the bleeding had ceased and the vertex was presented in the left occipito-posterior position. Auscultation revealed a feeble fetal circulation, but as the pelvis was roomy and my patient somewhat exhausted I gave her freely of milk punch until her pulse became

stronger which it did in half an hour, when as the head had ceased to advance I applied the forceps and delivered her of a medium sized girl which in a few minutes began to cry with some vigor, contrary to my expectations, for I had told them it would probably be dead. Its vitality had been preserved by the adhering part of the placenta, which then came away quite easily. A teaspoonful of fluid extract of ergot contracted the womb firmly. My patient was weak for several days, but under the use of tonics with nourishing food she soon recovered her usual strength.

DISCUSSION.

Dr. A. H. Smith remarked that this case being partial and without profuse hemorrhage could have been best carried through by rupturing the membranes and bringing down the head which would have stopped the hemorrhage as soon as it engaged in the superior strait. Dr. Smith asked the question. Under what circumstances are we warranted in interfering? It the hemorrhage is alarming and the patient exhausted, she is in a poor condition to bear interference, and on the other hand we have no right to interfere if there is no pain or hemorrhage. To interfere by manipulation is very dangerous unless the uterine contractions are rapid and effective after labor once begins. The position of the child should be carefully and accurately determined by external manipulation before interference becomes necessary was to know where to seek the feet if turning becomes imperative.

When the placenta previa is complete, dilatation of the os causes a terrific hemorrhage, the blood streams from the patient like water from a hydrant or a small fire plug and death comes very quickly. Only perfect knowledge of the conditon of things and the position of the child will enable the physician to avert the doom. Now as to the tampon. I would not use it. It hides the hemorrhage which may be going on profusely behind it, as was so vividly described by Dr. Goodell in his paper on "Concealed Accidental Hemorrhage of the Gravid Uterus" in vol. 2nd, *American Journal of Obstetrics*, in which he showed that the woman might bleed to death without one drop of blood escaping externally. The tampon conceals the hemorrhage without necessarily preventing it and while it remains in place one hand of the physician should be constantly on the patients pulse to note instantly any failure of the heart; while the other should be on her abdomen to note any changes in size of the uterus or position of the fetus. In Dr. Taylors case the treatment was beyond criticism because the result has been happy.

Dr. Goodell agrees with Dr. Smith that placenta previa is the most formidable complication in OBSTETRICS. No general rule can be made applicable to the treatment of all cases. In partial ones, the membrane should be ruptured and the head brought down. It must always be borne in mind that in these cases the implantation of the placenta has caused increased vascularity and thickness of the cervical walls, they are

easily ruptured, if torn bleed profusely. There is greater danger of septicemia from absorption of decomposing lochial discharges when passing over this surface if it is torn. He well remembered one case which he attended years ago in consultation with Dr. Augustin Fish, since, deceased, in which in consequence of, what he now considers, undue haste, lacerations of the cervix occurred and, although the labor terminated happily, septicemia set in a few days later and resulted fatally. It would have been better in that case to tampon. When the placenta is not central there is very little danger, there is some. The tampon may be used, but the pulse must be constantly watched and frequent abdominal palpation should be made. He had been struck with the method practiced by Dr. Ellwood Wilson more than twenty years ago. It consisted in gentle digital dilatation of the os; introducing first one finger then two and so on; as soon as sufficient space was obtained he gave ergot, made podalic version and delivered. Very few practitioners advise that method. Dr. Goodell had not met with many cases and the one spoken of above was the only fatal one. He has used Barne's dilators, taxis, strength and courage and has tried to adapt his treatment to the indications of each particular case.

Dr. W. H. Parish thought the tampon was not used as frequently now as it was a few years ago, either in the form of Barnes's dilators or the vaginal plugs. Under similar circumstances he would probably do as Dr. Taylor did. Partial placenta previa is not very dangerous, but in complete the hemorrhage is excessive. In one case he had tamponed for several hours, when the os being dilated, he etherized and readily delivered a living child. The mother was in imminent danger of death from hemorrhage. The abdominal aorta was compressed, ice was used to the cervix but without success. The hemorrhage was controlled by the application of a cloth wet with monsels solution to the denuded cervical and uterine surface.

Dr. Taylor has used the tampon in several cases of partial placenta previa and in numerous cases of abortion, and has never yet had bleeding to go on behind it. The line of treatment practiced in this case has always proved satisfactory as regards results.

Dr. Goodell remarked that the womb at term was large and concealed hemorrhage might be free enough to cause death but there was no such danger in an abortion at two or three months.

Dr. B. F. Baer exhibited a specimen of

SUBMUCOUS AND INTERSTITIAL UTERINE FIBROID,

and read the following report of the case:

Mrs. G., æt. 51, married, four children. Her first child was born after she had reached her thirtieth year, and the last one when she was thirty-eight, thirteen years ago. Her labors were very severe. Several years ago she began to lose large quantities of blood with her catamenial

periods, and to suffer with labor-like pains. This continued with increased quantity and severity until the cause was removed. Two years ago she had so great a flooding that it was thought for weeks that she would succumb. She gradually recovered from the effects of the hemorrhage, but has been losing flesh and strength ever since. Moreover, as she would recover a sufficient amount of strength to support it, a severe metrorrhagia would occur. Recently she had rarely been free from bleeding and a profuse, non-fetid watery discharge.

At the request of my friend, Dr. Fred C. Sieberling, the family physician, I met him at the home of the patient, at New Tripoli, Lehigh Co., Penn., when I saw her for the first time. She had a sallow, jaundiced and anæmic-looking surface, was somewhat emaciated, but did not have the characteristic cachectic appearance of carcinoma. Her pulse was 120, and not strong. As she was too weak and excited to permit of a thorough examination without it, ether was at once administered by Dr. J. W. Sieberling, when the following condition was revealed by physical exploration:

The upper portion of the vagina was occupied and distended by the cervix uteri, which was stretched and expanded over a firm, rounded mass which presented at the os; the latter was dilated to about the size of a silver dollar, and the body which presented resembled very much in size and shape the head of a seven-months' fetus. Bimanual examination showed the uterus to be as large as at the end of the sixth month of gestation, and rather symmetrically developed, but it was quite firm and resisting, if not hard. The sound could not be introduced, for the following reason: on the right side the tumor was firmly attached to the cervical wall all the way to the external os, and on the left almost to the same extent, though I was able to pass the sound and finger to the depth of about an inch. I confirmed Dr. Sieberling's diagnosis of submucous fibroid, and thought, from the size of the uterine globe, as outlined by abdominal palpation, that the tumor had also a deep interstitial attachment or *nidus*.

I advised an attempt at enucleation of the growth, as the only means of saving the life of the patient, and with the assistance of Drs. F. C. Sieberling and W. K. Kistler, I proceeded with the operation.

I was at a loss at first to explain the close connection which the tumor had with the cervical wall, a connection so intimate that it seemed in part to grow from that organ, but the history of the growth of the tumor was against that idea; the patient had been under close observation at least four years, during most of which time the cervix was free from disease. There had been no evidence of abnormal growth in the cervix until six months before the date of operation; about that time the tumor was detected at the internal os. I thought that the close connection with the cervical wall might have been due to adhesive inflammation, and acting on that theory, I began my operation by trying to separate the adhesions,

but I soon found that I had made a mistake, and that I was dissecting up the tissues of the cervical wall. I then concluded that it must be the capsule of the tumor, which had been stripped off by the growth as it was made to advance to the external os by contraction of the uterus, and this view was confirmed, for when I had removed the tumor the capsule hung as a curtain from the edge of the external os. After vainly endeavoring to remove the tumor by traction, I cut directly into it with scissors, dividing the mass into two portions. I then introduced Thomas' spoon-saw into the cavity, and with it and my fingers, tore the growth from its nest in the fundus and sides of the uterus, removing it piecemeal. Very little hemorrhage occurred during the operation, which lasted fully an hour and a half. After trimming the ragged edges of the capsule from around the os, I injected the cavity with vinegar, and packed it full of sponges saturated with the same excellent antiseptic and hemostatic. A gr. ss. morphia suppository was placed in the rectum, and the patient removed to her bed and surrounded by bottles of hot water. She reacted nicely, and in the evening ten grains of quinine were given. On the next day the sponges were removed, the cavity irrigated with hot carbolized water and repacked as before. Under the care of Dr. Sieberling, the patient has recovered without a single untoward symptom. The tumor probably weighed three pounds. W. H. H. GITHENS *Secretary.*

THE AMERICAN MEDICAL ASSOCIATION.

Thirty-Fifth Annual Meeting held at Washington, May 6, 7, 8, *and* 9, 84.

SECTION ON OBSETRICS AND DISEASES OF WOMEN.

Dr. Theophilus Parvin, of Pa., read a paper on

PUERPERAL SEPTICÆMIA,

in which he showed that the above title limited the disease to the condition in life peculiar to the female, and mentioned the physical moral, and mechanical causes which are supposed to originate it. The causes are by some divided into autogenetic and heterogenetic; the former being a self-created poison endangering life. The autogenetic theory is a confession of ignorance. Scarlatina is never held to be autogenetic, although it may arise and be developed without apparent cause. By the theory of heterogenesis, woman enjoys greater safety. In sporadic cases of the disease the symptoms are the same as in those arising from assignable causes. Some well-known causes of the disease are found when it occurs after contact with the poisons of the cadaver, of epidemic erysipelas, or malignant uterine diseases, conveyed from the diseased to the susceptible patient, or from the miasms of the cesspool or the emanations of sewer gas.

Dr. Parvin related the occurrence of the disease in a patient in whom a retained placenta had been removed in fragments and incompletely. On the third day fever, sweats, and abdominal tenderness gave evidence of the

affection, and the spread of the same disease to two neighboring patients showed its dangers. As in epidemics of scarlet fever the symptoms may be mild or severe, the intensity depending on the amount of the poison, the parts affected, the avenues of absorption, and the vital resistance of the subject. Its contagious powers have been demonstrated, and cannot be denied. Most obstetricians accept its cause as parasitic. To this effect we have the authority of Delore, Charpentier, Kleinmachter, as well as Spherical bacteria. Milk fever is but a mild form of the affection, and the influence of microbes is also shown in phlegmasia alba dolens. Delore, 1869, Orth, 1872, and Heiberg, 1873, found the parasites with the exudations, and the last observer traced them into the lymphatics, and with them he produced the disease. Microbes, we know, act indirectly through a solution of septic products. During the first three months of the year's attendance at the Philadelphia Hospital in a total number of seventy-two women he had twenty cases of septicemia and three deaths. This he accounts for in the bad hygienic conditions of the lying-in wards.

The author read some illustrative cases. One of a young colored woman, in which labor lasted twenty-four hours, the presentation being pelvic. On the fourteenth day after delivery, fever, pain, and symptoms of peritonitis announced the disease. *The patient did not have a chill;* death resulted on the seventh day. A *post-mortem* examination, made by Dr. Shakespeare, disclosed a general peritonitis, pleurisy, and pneumonia. The temperature at its maximum was but $103\frac{4}{5}^{\circ}$ Fahr.

A second case was that of a patient who had had a good labor; she was siezed on the third day with fever and delirium, *but no chill.* The uterus was tender, the temperature 105,3°, and death occurred on the fifth day of the disease. The autopsy made by Dr. Formad showed the lungs in an inflamed state and full of altered blood. The heart was soft, the muscles friable, and symptoms of a recent non-purulent peritonitis with exudation were present, whilst the mesenteric glands were much enlarged and full of cheesy infarctions. The size of the uterus was increased, its mucous membrane inflamed, and showing in parts commencing gangrene. The liver was that of acute yellow atrophy; the spleen was disintegrated, and the kidney softened.

Another case was that of a multiparous woman of twenty-four. It was a left shoulder presentation. The course of the labor was delayed by the accidental absence of the accoucheur. Podalic version was performed and a dead child delivered. By digital examination a vesico-vaginial slough was discovered on the second day. The patient had suppression of urine, irritable stomach, chills, fever, diarrhœa, and a foul lochial discharge. Death ensued on the eighth day. The examination after death, made by Dr. Shakespeare, disclosed peritoneal inflammation; uterus enlarged more than normally, its interior lining inflamed and partly gangre-

nous; and on the right side a rupture of the cervix and lower portion of the uterine body. The rupture was without indicative symptoms, an occurrence, as stated by Hervieux, as not infrequent.

Of seventeen cases which recovered, some had and some did not have chills. The secretion of milk was lessened or absent, whilst three constant symptoms prevailed; fever, painful abdomen, and arrested involution of the uterus. The highest rise of temperature noted was 106° F. The treatment was supportive, antiseptic, and antipyretic with uterine injections of carbolic acid solution or that of corrosive sublimate, one to two thousand.

Dr. Seymour, of Troy, N.Y., mentioned an article in the April number of the *American Journal of Obstetrics*, in which he recorded the histories of two cases of the disease. In one it was associated with a traumatic hæmatoma of the right broad ligament, which suppurating, the patient died. The other was associated with a laceration of the supravaginal portion of the cervix on the right side. The uterus was washed out twice a day. In the beginning of the treatment a chill followed the injection, but this was subsequently avoided by the administration of twenty grains of quinine a short time previous to the introduction of the local antiseptic fluid. He thinks that his two cases will explain some of the conditions in cases in which examinations are not made.

Dr. Robertson, of South Carolina, has never seen a case of puerperal septicæmia in a negress during a practice of forty years.

Dr. R. S. Sutton, of Pittsburgh, said that in obstetric practice he had served his day, and the sentiments expressed in the paper accorded with his own views. The disease is always perhaps due to a poison *sui generis*, and the autogenetic theory is but a confession of ignorance. Personal cleanliness is of prime importance, and especially as regards the physician's hands. It is a precaution that all can take. The under surface of the tips of the finger-nails must be clean; the hands washed in turpentine and an alkaline solution.

Dr. Parvin, in reply to an inquiry, closed the discussion by saying that the antiseptics which he has used are two; carbolic acid and the corrosive sublimate. The experience of last winter led him to reject the use of vaginal injections, as the frequency of occurrence of the septicæmia was not thereby diminished, but in a certain number of cases it seemed to occur even more frequently. In septicæmia with fetid uterine discharge the intrauterine injections are indicated.

Dr. Wm. H. Taylor, of Ohio, read a paper on

THE MANAGEMENT OF PROTRACTED LABOR.

He limited his considerations to the conditions in the earlier stages of the process. He is justified in bringing up the subject by a quotation from Dr. I. E. Taylor on the neglect that the matter has received. The author thinks that rupture of the membrane should fix the close of the first stage.

the danger is exhaustion from pain, and the inhibition of labor by nerves of cerebral origin (*Lusk*).

Heretofore, active interference, he said, has been almost exclusively limited to the period after full dilatation of the os or even engagement of the head; but is it not true conservatism to avert danger rather than be driven by some bad condition of the woman to a last resort? A commonly asserted cause of delay is "a rigid os." That such a state exists *per se* he doubts. Proper uterine contraction will be accompanied by appropriate changes of tissue of the cervix and os, and delay in labor attributed to a resisting os which is really due to insufficient uterine action, and local means resorted to, to dilate the os, are efficient for exciting uterine effort; spasmodic contraction of the os from fissure, too early rupture of the membranes, etc., may resist the powerful efforts of the uterus for a long time. While all are familiar with the symptoms of excess of liquor amnii, we rarely see notice of the effects of too little fluid; in such a case, Skene says: "A tense condition of the membranes may prevent bulging of the bag of waters, and the membranes may appear to the touch as if stretched across the os, or the head lies close down over the os uteri," and Dr. Taylor adds, a small uterine tumor, with the intestinal resonance, reaching close up to the solid mass. In protracted labor, if the head be not easily compressed, nothing will be gained by waiting, and he urged the adoption of version far earlier than is usually done. In the case under consideration, the head above the brim and the membranes unruptured, we have the conditions which make version easy and safe, and allow its performance before the woman is exhausted by long-continued suffering, and for the child we now have only the dangers of a breech delivery, which are less than an unaided delivery through a contracted pelvis. He rates it as the most valuable treatment.

Poverty and bad hygiene of cities are causes of the common pelvic malformations and of retarded labor. In the first stage ether, opium, Barnes's or Skene's dilator, and the forceps to bring the head into the cervix, may be required. Slight contraction of the brim is difficult to recognize. If the head be compressible, it may be permitted to wait. In early version with membranes unruptured the danger is less, and to the child only that of a breech delivery. He concurs with Johnson, of Dublin, in the early use of the forceps after rupture has prematurely occurred and pressure resulting. The view of Fritsch, that craniotomy should be done when pressure has long continued and there is no liquor amnii, because of the presumptive death of the child, will meet with little approbation in America.

Dr. Isaac E. Taylor, of New York, spoke of the gentle use of his forceps to bring the head in relation to the neck when digital dilatation or dilatation by Barnes's method, is objected to. The use is such cases is a conservative principle.

D. A. Reeves Jackson, of Illinois, then read

A Contribution to the Relations of Ovulation and Menstruation.

The aim of scientific investigations, he said, is the attainment of truth, and arguments to be successful must be based on known facts. After giving a short record of the dates and names of the early observers on the condition of the bodies first described by De Graef, whose name they bear, the author continued to say that Baer, in 1827, by discovering that the follicle was not the ovule, but only the surrounding structure, laid the basis of the ovular theory of menstruation. Negrier, Barry, Fouchet, and others later on, showed that menstruation is due to ovulation. The theory became generally accepted because it seemed so reasonable, yet the author does not believe that all the facts have been fully observed or rightly explained. Ovulation and menstruation may be independent of each other. Malpighi saw the follicles developed in the fœtus and De Graef the same in children. All obstetric writers admit that conception may occur without menstruation. A number of cases were quoted in which from eight to twelve children were born, the mothers not menstruating during the whole time. Yet arguments based on such facts are not satisfactory, since conception seems the preventive cause. Scanzoni admits that the Graafian follicles enlarge during pregnancy, and Meyhofer thinks this enlargement returns monthly during the period of gestation. Cases in which autopsies were made affirm these views. In a woman who had never menstruated, and who died at the age of seventy-eight, many false corpora lutea were found. Menstruation may occur without ovulation, as reported, in the cases of Gerhardt, Stedman, Senatri, and Meadows. Prof. Leypoldt has made a valuable contribution to the subject by his examination of the ovaries of thirty-two subjects in whom the date of the last menstruation had been fixed.

The author does not think that the point in dispute has yet been settled, but believes that Leypoldt shows that the Graafian follicles may rupture at any time without the occurrence of menstruation. He maintains, in conclusion, that there is no connection between the two but a mere coincidence.

Dr. H. F. Campbell, of Georgia, was pleased to find his views confirmed by the author. He, too, does not think that the two processes are to each other as cause and effect, but are independent. He thinks that after oöphorectomy menstruation is rather increased than diminished. He mentioned a case of Dr. Emmet, in which it continued for eighteen months afterwards, and one of Dr. Engelmann of three years. The "egg-making" and the "nest-making" apparatus have also a distinct blood-supply. In another instance, after castration, the menstrual flow was so profuse that hæmostatics were needed.

Puberty, with its signs, has a special purpose; it is to grow a womb

and fecundated ovum. If favorable conditions do not exist, menstruation—a waste—ensues.

Dr. G. J. Engelmann, of St. Louis, though that the above views tend too far in one direction. He has examined many menstruating uteri and finds the ovule to have burst within from the first to the third day of menstruation. He holds the two processes to be coexistent, but not dependent. The purpose of the uterine congestion is to thicken the mucous membrane and prepare a bed for the ovule. If impregnation does not follow, a flow of blood relieves the state of congestion and carries away with it the superabundant tissue.

As a rule, if one function be disturbed the other is also likely to be so. We are yet ignorant of the full facts. In a case in which he thought he had carefully removed the ovaries and all their tissues, conception followed in three years. In answer to a question, Dr. Engelmann said he has never heard of or seen a third ovary.

Dr. Healy, of Maryland, called attention to the fact known to sportsmen that the spaying a bitch after rutting has occurred fails of its purposel and she is still followed by other dogs. He thinks it due to the establishment of a bodily habit, and points out the interest that would be attached to the case of castration in a subject who has never menstruated.

Dr. Robert Battey, of Georgia, thought that the discussion of menstruation is in which opponents do not use the term in a common sense. Menstruation may occur in a child of four, a woman of twenty-five, and one of ninety-two. The one is true, the others pseudo-menstruation, the presence of Fallopian tubes, vagina, uterus, or vulva, is not essential for the occurrence. He holds that Dr. Campbell's views can be carried still further, and he asserts that sterility does not even follow after extirpation of the ovaries. He mentioned an instance of conception in which double ovariotomy had been done two years previously.

Dr. Jackson, in concluding the discussion, gave his definitions of ovualation as the ripening and extrusion of an ovule, and of menstruation, a sanguineous flow from the mucous membrane of the uterus. He does not think we can speak of a false menstruation because it occurs in a child or old woman. He has seen menstruation where only the cervix had been left after operation.

Dr. J. Herbert Claiborne, of Va., read a paper on

THE USE OF CHLOROFORM IN LABOR.

His conclusions are founded on two hundred cases in private practice. He thinks the anæsthetics are not used enough, and gives the following as his conclusions:

1. The process of labor in all its stages is facilitated by chloroform.
2. The duration of all its stages is shortened.
3. The pain of all the stages is entirely and safely blunted.

4. The occurrence of accidents is less frequent.

In opposition to his views he quoted the opinions of others as expressed in Playfair's text-book, in which it is to be used only during the second stage, and the dangers of post-partum hemorrhage is insisted upon. His own views were once identical with these, but he now wished to make a public recantation. He described the sufferings of the woman and the great blessing which she found in the anæsthetics. In exceptional cases, in which there is little or no pains he does not think it necessary. In the first stage chloroform need only be given during the pains and not in quantities sufficient to produce unconsciousness. In a stubborn and undilated os, chloroform relaxes the circular fibres and dilatation ensues. In the pains of descent and in the last severe agony the author's feelings impel to its use. He has not seen labor delayed or arrested. In only one instance was the perineum ruptured, and then as the result of the unskillful use of the forceps.

To show the influence of an anæsthetic on labor, he related the history of a woman who, upon some one's advice, became intoxicated just before her confinement, from the effects of half a pint of whiskey. In six hours every stage of labor was completed, yet during all this time there was no other manifestation of life from the mother. In the third stage he believes it increases uterine contraction and diminishes the risk of hemorrhage. Chloroform is the sheet-anchor in puerperal convulsions. As to its action in retained placenta and hour-glass contractions, he has had no experience. In instrumental and manual interference it is imperatively demanded. He used the chloroform prepared by Squibb—it is more rapid, certain, and agreeable than ether, whilst it does not possess its stimulating or intoxicating effects. In answer to an inqury, the author replied that he has seen no bad effects on the fœtus from its use.

Dr. Jepson, of W. Va., has been more and more impressed by the frequency of short and easy labors; he has not observed the agony and suffering of which the author spoke. He found that chloroform induces hemorrhage by lessening uterine contraction. He limits its use to instrumental deliveries or unusual suffering. In the majority of cases he lets nature do her perfect work.

Dr. A. Dunlap, of Ohio, made some remarks on

AN IMPROVED METHOD OF TREATING THE PEDICLE IN THE REMOVAL OF LARGE INTRAPERITONEAL FIBROID TUMORS.

In the removal of these tumors, a successful treatment of the pedicle is necessary to make the operation legitimate. He is satisfied that the pedicle after ovariotomy does not slough, but becomes revitalized. He has invented a clamp and self-threading needles, by which the pedicle is so secured that no hemorrhage occurs, and there is no laceration or injury to the peritoneum covering the stalk; the sutures and the divisions are both practised on the proximate side of the clamp.

Dr. Isaac E. Taylor, of New York, read a paper on

THE MANAGEMENT AND RECTIFICATION OF THE CHILD'S HEAD IN DIFFICULT CASES OF OCCIPITO-POSTERIOR PRESENTATION.

He gave a summary of the important views on the cranial position since the subject was treated by Naegele, Sr., in 1819, the natural mechanism of the presentation, and the methods of treatment. He next considered the theories explaining rotation of the head. He holds that the movements of the child's head is explained by the action of the uterine forces on the vertex. The uterine action must coincide with the uterine axis. In some cases he has seen rotation occur in the intervals of contractions. He thinks face presentations are accompanied with no more dangers than are occipito-anterior. Should the perineum be much distended, and the head unable to escape from under the pubis, artificial aid is needed.

For rotation to occur in some difficult cases it is essential that the shoulder enter the superior strait, and rotation of the head and shoulder to coincide. In the use of the forceps he pointed out the necessity between consonance of action in their use, and natural rotation. Traction, too, may cause serious injury. When forceps fail, manual aid is needed. The hand is the natural and essential means. We may either move the position of the head or make it a face presentation. Conjoined manipulation is of great value. The literature of the subject, and his own experience justify him in proposing the applicability of converting some of these cases into face presentations.

A paper on the

CAUSES AND PREVENTION OF LACERATIONS OF THE FEMALE SEXUAL ORGANS,

by the late Dr. S. D. Gross, of Philadelphia, was read by Dr. S. C. Busey, of Washington, D.C.

My object in appearing before you, as stated in the programme, is to read a paper on lacerations of the female sexual organs consequent upon parturition. It may seem odd, if not impertinent to those of you who do not know me intimately, that I should venture to discourse upon such a subject so essentially in the hands of specialists; but they will perhaps pardon me if I tell them that, although I have all my professional life, extending over a period of fifty-six years, been a general practitioner, yet during the first third of a century of that life I was more or less extensively engaged in obstetric practice; while during the last third I have had more or less to do almost daily with the treatment of female diseases requiring the use of the speculum and operative interference of various kinds. I have performed ovariotomy, and on numerous occasions sutured the perineum and the vesico-vaginal septum with a degree of success, if not highly flattering, at all events respectable. Within a short time after my entrance into the profession I translated Hatin's *Manual of Obstetrics*, a small volume which had an extensive circulation in its new dress; in 1839 I con-

tributed several pages in my work on pathological anatomy on "uterine moles," founded upon original observations and dissections; and in 1854 I unearthed, after much labor and research, Ephraim McDowell's claims to the fathership of ovariotomy, up to that period generally ascribed to other sources. Moreover, as a writer on systematic surgery, compelled to keep abreast of the knowledge of the times, I have embodied in my treatise an elaborate chapter on the diseases and injuries incident to the genital organs of the female sex, reflecting, in some degree, an outline of the existing state of the science. I make these remarks in anticipation as a justification for bringing before the Section a subject which in some of its relations has been so often and so elaborately discussed by many of the ablest men all over the civilized world. I might have taken my budget before the Surgical Section but believing that fairer justice would be meted out to it here, I have given it this direction. When I have finished my task I trust you may not be able to say with Apelles, "Ne sutor ultra crepidam;" but rather incline to the words of Tacitus, "Nihil scriptum miracuti causa."

It is astonishing how much has been said on the treatment of these lesions, and how little has been said upon their causes and prevention. Operations almost innumerable have been devised for their relief; volumes have been written on the subject, and everywhere in town and city the gynecologist is ready to offer his services in sewing up lacerations of the genital organs of unfortunate and maltreated women. Seldom do we hear the voice of any of them raised in behalf of preventive measures, and then only in a roundabout and indirect manner. I am here this evening not to wrestle with shadows or imaginary demons, but with stern reatities, and to speak the truth, the whole truth, and nothing but the truth, as I understand it. The time has arrived when this matter is to be met in a bold and fearless manner.

The lacerations of which I desire to speak are those which affect—1, the perineum; 2, the vesico-vaginal septum; 3, the recto-vaginal septum; 4, the neck of the womb; and 5, the urethra, or mouth of the urethra and vagina.

Laceration of the perineum is of frequent occurrence, and cannot always be avoided even under the most judicious management. In primiparæ the fourchette is almost invariably ruptured, especially when the tissues are unusually rigid, and the protruding structures are very large, or very rapid in their descent, or where the perineum is not properly supported. Fortunately, such an occurence is of little moment as regards the patient's wellfare either present or prospective. But it is very different when the rupture is extensive, involving a large portion of the perineum, or perhaps extending, as not unfrequently happens, through the sphincter muscles of the anus and the lower extremity of the vagina. Then such an accident constitutes a great evil, and demands skill for its cure.

Lacerations of the vesico-vaginal septum are among the saddest of calamities, entailing endless suffering upon the poor patient if not remedied. I know of nothing more calculated to excite our sympathy or to enlist the noblest qualities of our nature. In the worst forms of such accident, in which science and skill offer no relief, as occasionally happens even in these enlightened days, death would be a welcome visitor. Equally distressing is a recto-vaginal fistula, or a rent with loss of substance in the urethra.

Lacerations of the neck of the uterus, even when comparatively slight, often entail great suffering, local and constitutional; the former manifesting themselves in various kinds of pains and discharges, and the latter in almost every form of nervous disease of which it is possible to form any conception, together with more or less derangement of the digestive and assimilative organs. An idea may be formed of the frequency of these accidents when I state what has been long known to most of you, that one of our most distinguished native writers on gynecology has expressed his conviction that rupture of the neck of the uterus, in greater or less degree, is almost inseparable from a first labor. If this be true, it would inevitably go to prove that God has made woman much less perfect than the world has given him credit for. As childbirth is one of the special prerogatives of woman designed to perpetuate the race, there is something peculiarly distressing in such an idea. Looking at the matter from a practical standpoint, one would naturally conclude that the Author of our being had constructed the womb with special care to protect the organ, at least as a rule, against the possibility of a contingency fraught with such sad consequences. If we assume the correctness of Dr. Emmett's statement, we may well wonder, without irreverence, why Almighty God did not create simultaneously with woman a competent gynecologist ready to meet this inevitable evil, for such it unquestionably must be whenever it occurs. If this evil is the outgrowth of civilization, then the sooner we get rid of this civilization the better for our poor wives and daughters considered as procreating beings.

It was a happy circumstance when in 1851 Sir James Simpson first called attention to this important subject. It was like the discovery of a new world in human progress. In that year he proclaims the important truth, until then unknown or only guessed at, that fissuring and lacerations of the cervix are not, as had been generally believed, rare lesions during labor, but on the contrary very common, especially in primiparæ, and he supports his views not only by what he saw with the aid of the speculum, but by an appeal to autopsies in which rents and fissures were detected in the mouth and neck of the uterus after natural labor. The facts thus disclosed by the great Scotch professor were afterwards brought more prominently before the profession by Dr. Emmett. To these two distinguished men we are mainly indebted for the knowledge we now possess upon this

important subject; knowledge of priceless value to suffering woman, and of the greatest consequence to the obstetric practitioner.

If we inquire into the exciting causes of these accidents, it will be found that they vary with the situation and structure of the part involved. The great factor in laceration of the perineum is parturition, either alone or in conjunction with the means employed to effect it. When this wall to the outlet of the pelvis is very rigid and the action of the uterus unusually vigorous, forcing down the head of the child with great vehemence, it is easy to conceive not only of the possibility but of the great likelihood of such an accident, especially in the absence of proper support. In such a condition the perineum is very much, to use a figurative expression, in the position of the door of a room, with a big, burly fellow on the inside who is knocking for egress. To carry out the simile, he does not in every instance batter down the whole of the opposing obstacle, but only a portion of it, representing a comparatively slight laceration, as where the fissure is limited to the fourchette or to the anterior portion of the perineum, but when the resistance is extreme the entire wall is torn, the lesion extending through the sphincter muscles into the rectum; in other words, the entire door is battered down, and the vagina and the bowel are laid completely open.

Of the various kinds of lacerations of the vagina, or of the vagina and uterus, constituting what are known as fistules of the bladder or of the rectum, those dire calamities which form so prolific a field for operative interference, the most common factor is unquestionably very prolonged or very severe pressure. "This is," says Thomas in his able work, "beyond doubt the most common source of the accident though it may also attend a rapid labor in which the vagina has been pressed against some point of the pelvis with great violence. The active agent of this pressure is generally the child's head, especially when it is disproportionately large or wedged in behind the pubic symphisis, unduly compressing the vesico-vaginal septum, followed by destructive inflammation and sloughing. The accident is generally the result of prolonged pressure as when the child's head has been wedged in this position many hours, perhaps neither receding nor advancing; or it may be caused in a very short time when the pressure is concentrated and severe. If the pains are very violent the pressure of the presenting parts may be so great as to end in actual rupture of the vesico-vaginal septum, but as a rule the opening is the direct result of concentrated pressure, eventuating in inflammation and sloughing, precisely as in an ordinary bedsore. Vesico-vaginal fistules are not infrequently produced by the pressure of the child's head upon a distended bladder. How far the maladroit use of forceps, vectis or other instruments may be capable of producing such lesions will form the subject for future inquiry.

The principal causes of lacerations of the cervix are precipitate labor,

labor attended with rigidity of the mouth of the womb, and instrumental labor. Lacerations are not uncommon in breech cases, in which labor is obliged to be expedited on account of the retained head before the cervix is properly dilated. These are unquestionably the most frequent and efficient factors in the production of accidents in this situation. If to these we add the presence of cicatricial tissue in the cervix, malpresentations, and section of the cervix, as occasionally practiced by ignorant obstetricians, we have a complete list of all the causes, active and predisposing, of rupture of the uterus during normal parturition. A premature discharge of the aminotic fluid acts mainly, I presume, as a means of retarding labor than as a cause of laceration of the cervix. I must not forget to allude here to a statement by Dr. Emmet that laceration of the cervix is of frequent if not common occurrence in cases of criminal abortion. I do not know that this fact has been noticed or verified by other observers, but of its truth I entertain no doubt. In his tables Dr. Emmet gives ten cases of this kind, and he declares that he has met with this accident in every case where the woman admitted the fact of exposure to malpractice.

Having thus briefly discussed the situation and causes of the accident in question, let us in the next place inquire into the best means of preventing them, the chief object which I have had in view in bringing this matter before you to-day. There is more honor in one ounce of preventive midwifery than in one pound of curative gynecology, the outgrowth of ignorant or meddlesome obstetric practice. That many of these occurrences are inevitable, without any just blame attaching to the professional attendant, is well known to every practitioner of the least experience, but that they may as a rule be prevented by the exercise of proper care and skill, will, I think, be readily admitted, at all events it is true.

The great remedy, as laid down in the books, for rigidity of the perineum is manual support during the descent of the child's head, or whatever else the presenting parts may be, this, as a rule, is quite sufficient, but not so if the pressure is very great. In this event the accoucheur is expected to make use of the hot bath, and of hot fomentations, to anoint the parts with oil, and even, in extreme cases, to make slight incisions on each side of the middle line. Nothing is said in these injunctions of the abstraction of blood as a means of relaxing this tense, resisting wall which so obstinately stands in the way of the completion of the parturient process.

What are the active agents of this resistance? Unquestionably the muscles of the perineum, the sphincters of the vagina and anus, the transverse muscles, and the elevator muscles of the anus. The skin and connective tissue offer no obstacle. The whole difficulty resides in the muscles, and its amount is precisely in proportion to their development, great in strong, young, robust women, comparatively slight in those of an oppo-

site character. If this statement be correct, and no one can doubt it, it follows, as a necessary corollary, that the obstacle is most readily overcome by some measure that will relax the perineal muscles. Hot water, oil and medicated unguents will not do this, and no sane man would wait for the tardy and uncertain effects of local bleeding. A far better plan is to take blood at once from the arm, from a free orifice in one of the large veins, the patient sitting up in bed during the operation, so as to produce the most rapid and decided impression at the least possible expense of the system. If there be anything better than this, anything more likely to answer the purpose, I am not aware of it. The loss of ten, twelve, sixteen, or even twenty ounces of blood can do no harm in such a condition of things. A few days under proper treatment always suffices to replace it, while, as a rule, it promotes rather than retards recovery, by rendering the woman less liable to puerperal fever, peritonitis and pelvic cellulitis.

In regard to lacerations of the vesico-vaginal septum, much may be done in the way of prevention, and also in regard to rents into the rectum. It is self evident that anything that lessens the size of the canal through which the child is to pass, or that seriously interferes with the descent of the child's head, must act as an impediment to delivery. All obstetric teachers are aware of this fact, and hence they take special pains to instruct the young practitioner to see that the rectum is well emptied during the later stages of pregnancy, or, at all events upon the approach of labor, and that the urine is evacuated from time to time as the labor progresses. These precautions are unquestionably most important safeguards, and if duly attended to, are rarely followed by serious injury. If, on the contrary, they are neglected, as I fear is not infrequently the case, especially among the lower classes of woman, it is easy to conceive that the consequences will be of the most direful nature, especially if, superadded to these obstacles, there is an impacted condition of the child's head, along with violent uterine contraction. Under such circumstances it is difficult to conceive how the poor patient could escape injury in some form or other. The machinery must break down somewhere. A few hours may suffice to do the mischief. The only remedy, of course, is the forceps or crochet, and the former can not be employed too soon. The bladder must be liberated, or a vesico-vaginal opening, if not something worse, will be the inevitable result.

The proper remedy for the relief of the stationary head, whether impacted or simply arrested by the inertia of the womb, is — provided the cervix is sufficiently dilated or dilatable—the forceps, that "noble instrument," as it was called by Chapman, who in 1733 published the first account of it, upward of one hundred years after its invention by Paul Chamberlen, of England. I shall not speak of the numerous modifications which this valuable instrument has experienced in the hands of the

obstetricians, nor detain you by asking whether the long instrument is preferable to the short, or the short to the long. In the hands of the judicious practitioner each has a distinct and separate value; but it will be pertinent to the objects of this paper to inquire into the reasons which have led to the great changes which have taken place in regard to the frequency of its use.

Beginning with the great Baudelocque, the most illustrious accoucheur of the last century, we find that he applied the forceps once in 561 cases; Clark in 728; Collins in 617; Lachapelle in 293; Baer in 274; Boivin in 214; Davies in 53; Naègel in 31; Kluge in 16; Carus in 14, and Siebold in 7 (1).

Smellie, who flourished in the middle of the last century, and who was the most famous accoucheur in his day in Great Britain, applied the forceps once in 125 labors, and Merriman, another distinguished English obstetrician, once in 93.

From the late Dr. Churchill, of Dublin, we learn that in Great Britain, until recently, the forceps were employed once in 249 cases; in France, in 140; in Germany in 106.

In this country the fashion is to apply the forceps very frequently, both in private and hospital practice. Some of my friends inform me that some accoucheurs resort to the instrument as often as once in 4 labors, others in 6, 8 or 10. Whether the forceps are applied as often in Great Britain and on the Continent of Europe, I am unable to say, but the difference, if any, must be very trifling.

Dr. William P. Dewees, who was the great Philadelphia accoucheur of his day, and who delivered upward of ten thousand women, writing in 1843, holds the following language in regard to the forceps: "However strongly I may be impressed with the utility of the forceps, I should not feel myself warranted to use them as often as they appear to be in Great Britain and on the Continent of Europe. The frequency with which they have been employed in some instances is really alarming, and, I had like to have said, must have been too often unnecessary. In my own proper practice, I have not employed them oftener than once in three hundred and fifty cases, though I have been under the necessity of using them very frequently in the practice of others." (2)

Notwithstanding that Dewees so seldom employed the forceps in his own cases, we nowhere find that he had any serious lacerations of the genital organs. In the tenth edition of his *Treatise on the Diseases of Females*, published in 1854, "with the author's latest improvements and corrections," not one word is said upon the subject, not even upon rupture of the perineum. Now, if such accidents had occurred under his

1. Robert Lee's Table, in Lectures on Midwifery.
2. Midwifery, p. 292.

observation, he could hardly have failed at least to mention the fact. If I am told that Dewees did not use the speculum, and could not, therefore, detect them, I reply that he had eyes to see and fingers to feel. He certainly could tell what the nature of the case was when urine or fecal matter flowed off by the vagina.

Philadelphia's great accoucheur, Dr. Ellwood Wilson, has superintended, as he informs me, 10,600 cases of labor at the Lying-in Hospital, in that city, without the occurrence of a single, solitary instance of vesico-vaginal or recto-vaginal fistule. He, like others engaged in large private practice, has witnessed numerous atrocities in consultations. The testimony of my late colleague, Professor Ellerslie Wallace, is precisely of the same import.

In a discussion of the admirable paper of Dr. Emmet, "On the Necessity for Early Delivery, as demonstrated by the Analysis of 161 Cases of Vesico-vaginal Fistula," read before the American Gynecological Society, in 1878, Dr. D. Humphrey Storer declared that in an experience of several thousand cases of midwifery, he had witnessed only two cases of vesico-vaginal fistula, adding that there was no man in Boston who applied the forceps less seldom than he. He approved of the employment of the forceps in certain conditions of labor, "but the idea," he remarks, "that the forceps is an instrument which must be almost constantly used, is, I think, a dangerous one." This sentiment was elicited by the statement of Dr. Emmet that the great factor in the production of vesico-vaginal fistule is impaction and long detention of the child's head, aided by distension of the bladder, and the assertion that instrumental delivery has rarely if ever any agency in the production of this sad occurrence.

Dr. H. P. C. Wilson, of Baltimore, on the same occasion, asserted that he had made it a rule for many years, when called to cases of labor, to carry with him a bottle of chloroform, adding that he frequently used the forceps when he was certain that the woman would be delivered safely by nature, simply to shorten the labor and relieve suffering. Dr. John L. Altee, in referring to Dr. Wilson, said: "The older I grow the more apt I am to employ the forceps."

In opposition to these sentiments I take leave to cite the views of America's latest writer on obstetric medicine, Dr. Lusk, as expressed in his admirable treatise, *The Science and Art of Midwifery*, the second edition of which was issued only a few months ago. "I can only say, declares this excellent author, "that with increasing experience my own practice has grown more and more conservative, and my own belief is that true wisdom requires us to abstain from even trivial operations as long as nature is able to do her work without our assistance."

Is it not a fact, I would ask, that the forceps are often used merely as a means rather to save the time of the accoucheur than as a means to prevent the suffering of the poor woman, to enable him to meet another en-

gagement, to visit the theatre, or to attend a dinner or an evening entertainment?

Passing along the streets not long ago, said Dr. Goodell to me a few months since, my eye lighted on a gentleman walking rapidly on the opposite side, who, at the moment he recognized me, shook his green bag at me, exclaiming, "reed-birds for supper," and hurried on.

I take leave here to quote what I deem eminently pertinent to this part of my paper, a passage from a communication that appeared in the New York *Medical Record*, March 8th, of the present year, from the pen of Dr. E. A. Dugas, of Augusta, Georgia: "When I graduated in 1875, an old sage in the profession advised me as follows: 'My boy;' said he, 'I am an old man, I have practiced over fifty years, and, as you are aware, have been very successful. In regard to your labor cases, I would give you the following advice. First, as you intend practicing in the city, make it a habit of leaving your forceps at your office, for if you ever require them you will always have ample time to send for them, and your not having them with you may save some women much trouble. Second, do not examine your patient much or often, see that things are right, and then let nature manage the case.'"

The "old man" here alluded to is no less a person than the great and venerable Dr. Louis Alexander Dugas, a man of vast experience as a surgeon and an accoucheur, and emphatically one of the sages of our profession. How wise is such advice in contrast with the accursed practice of the present day, when every obstetrical fledgling thinks himself competent to use the forceps, and is anxious to get his "reed bird supper," I leave you to judge.

If all accoucheurs were well educated, and well versed in the use of the forceps there might be some justification for the frequency with which they are applied at the present day. There might even be some justification in hitching them on a child's head, when nature is fully equal to her task, to get home in time for a good supper, but to use them on every pretense, as is often done nowadays, by every sciolist, hardly out of his swaddling clothes, is, if you will allow me to say it, simply damnable. Surely our obstetric teachers have a great deal to answer for in sending forth every year armies of incompetent young accoucheurs. Surely they commit a grave sin when they teach the frequent application of this "noble instrument;" employed far too seldom in former times, as it is certainly employed too often in ours. In conversing recently upon this subject with a distinguished obstetric teacher, now retired, he said to me: "I always enjoined it upon my pupils, after pointing out to them the uses and abuses of the forceps, to carry the instrument with them to every case of labor, adding that it was just as important as it is for the mariner to carry his compass with him to sea." Without wishing to disparage the judicious use of the forceps, which I have no right to do, and which

God forbid I should do, I think a careful consideration of the case justifies me in endorsing the opinion of Baudelocque, uttered more than a century ago, that the forceps, as generally used, have done more harm than good, and in this view I am glad to be able to say that I am sustained by many eminent, able and experienced obstetricians and gynecologists of the present day.

That many accidents happen for the want of a proper use of the forceps, or of their timely application, is proved by the numerous cases of vesico-vaginal and other fistules, and by the still not infrequent sacrifice of the child, if not also of the mother; of the former by fatal compression or craniotomy, and of the latter by exhaustion, heart clot, pulmonary obstruction, or other causes. It would be difficult to find in all the records of obstetric medicine a case which more sadly and forcibly illustrates the baneful effects of the want of the proper use of the forceps than that of the Princess Charlotte, whose death, in 1817, threw the whole British nation into mourning. The amniotic liquor had been discharged early in the labor, and although the head had long been in the lower strait, the delivery, which took place at the end of fifty-two hours, was entrusted entirely to nature's efforts. No wonder that the child was still-born, and that the poor woman, exhausted by her protracted labor, expired soon after her delivery. No wonder that her principal accoucheur, Sir Richard Croft, committed suicide as the best remedy for his sad blunder and consequent mortification.

I come, in the third place, to inquire briefly into the proper preventive treatment of lacerations of the cervix. We have said that these injuries are most common, by far, in primiparæ, especially when pregnancy occurs in women somewhat advanced in life. Spiegelberg found that the average duration of labor in five hundred and six primiparæ was seventeen hours, and twelve hours for multiparæ. After the thirtieth year, the duration is materially increased, amounting, according to Hecker, in primiparæ, to twenty-one hours, and, according to Ahlfeld, to twenty-seven hours.(1) If we ask what is the cause of this difference in the duration of labor in primiparæ, and multiparæ, we shall find a ready answer in the difference in the pliancy and softness of the genital organs, and in the fact that the way is paved by the previous parturition. In primiparæ, especially in elderly ones, the genital organs are hard, firm, inelastic, unyielding; in multiparæ, on the contrary, they are comparatively soft and dilatable, yielding readily before the advancing head. In the one case the labor is comparatively easy, rapid, and safe, both to mother and child; in the other, painful, protracted, and fraught with danger; the uterus and perineum, not to mention the vaginal septa, are liable to be torn, and the child often perishes from injury inflicted upon

1 Lusk, Science and Art of Midwifery, p. 134. Second edition 1884

its head and lungs. If, in such a labor, delivery be attempted with the forceps before the parts are properly relaxed, or if attempts be made to dilate the parts forcibly with the fingers, it is easy to perceive that rupture, of a more or less serious nature, must inevitably happen.

Since the attention of accoucheurs was first directed to the frightful frequency of lacerations of the cervix in primiparæ by Simpson and Emmet, the subject has assumed a degree of importance previously undreamed of, and the question naturally arises here: How are these injuries to be avoided? How are we to abridge the duration of labor in primiparæ, and to place them on the same level with the multiparæ? There is but one way to accomplish the object, and that is by the employment of relaxing agents. It is a well-known fact that labor is more easy in hot than in cold climates, a circumstance which would naturally lead us to employ hot applications, as the hot bath, hot fomentations, and hot injections. I will not deny that such agents might occasionally do good, but what sense is there in parboiling a woman when we have at hand other agents far more speedy and more efficacious in their action. I do not allude here to chloral, ether, chloroform, and tartar emetic, the last of which, from its tendency to produce vomiting, could hardly in any case be a safe remedy, while the former, with some advantages, would seldom prove reliable to bring about the desired result. The great remedy which I have in my mind's eye is venesection, carried to a reasonable but sufficient extent to relax the system and through the system the genital organs. I do not introduce this as a new remedy, for general bleeding to overcome rigidity of the uterus and perineum was practised long ago, and is still practised by many of our older physicians under such circumstances; but I desire to recall attention to it as the most prompt, powerful, and efficacious of all the agents that the accoucheur can press into his service for the attainment of this end. I am not abashed if I am told, at the very threshold of this announcement, that venesection is an obsolete art, that none but old fogies would think of employing it, and that the blood during pregnancy undergoes such great changes as to render the loss of it, except in puerperal convulsions, an improper expedient during labor with a view of expediting it.

There was a time when this agent was very generally, I had almost said, universally used, even in my early days, in great rigidity of the sexual organs; fortunately, that day has gone by. But if the lancet was used too much then, it is certain, at least to my mind, that it is not used enough now. We are too apt, as a profession, to be influenced by prejudice, especially when it is backed by great authority. When the wether jumps the rest of the flock are sure to follow. I recollect when it was customary to bleed pregnant women for the relief of headache, dizziness, or vertigo, pulmonary congestion from aortic obstruction, and pelvic and sacro-lumbar pains. The "false pains," as they are termed,

often so harassing and worrying as to be a source of real suffering, may generally be promptly relieved by the abstraction of eight, ten, or twelve ounces of blood; and who would not bleed, bleed freely, when a plethoric pregnant woman is threatened with convulsions? To withhold the lancet in such a condition would simply be criminal, and yet some obstetricians, even of world-wide renown, would content themselves with the exhibition, in such an event, of chloroform, or of both articles combined.

If I be told a pregnant woman should not be bled because, while in this condition, she experiences a marked decrease of the corpuscles of the blood, I answer that this would be simply begging the question. If this were the only change which this fluid undergoes to meet the physiological necessities of the system during utero-gestation, there might be some reason for such a conclusion. But this is not the fact, for, while there is a marked diminution of red globules, there is also a marked increase of fibrin and albumen, assimilating the mass of this fluid to the condition in which it is found to be in inflammation. Instead, therefore, of using these changes as an argument against the use of the lancet, they afford the strongest possible evidence in favor of it whenever a powerful relaxant is required to facilitate parturition. May plethora not be caused by the presence in the blood of an undue proportion of its fibroid, albuminoid, and aqueous constituents? Blood is formed rapidly in pregnancy, to meet the demands of the system, and it is not at all necessary to perform experiments on bitches to prove what daily passes under our observation in the human subject.

The great strength, the exuberant health, the florid cheek, and the genial warmth diffused throughout the entire system, sufficiently attest the presence of an active circulation, with an abundance of red globules, although they may be relatively fewer than in the non-pregnant state. No rational accoucheur would bleed an anæmic woman, or a woman laboring under cardiac disease, aortic insufficiency, chronic malarial fever, or any wasting malady whatever. Such affections point out their own remedies—supporting, and not depleting measures.

There is an idea, almost universally prevalent, that the people of the present day do not bear loss of blood as well as they did forty, or even twenty, years ago, an opinion which has exerted such an influence upon medical men, as well as upon the public at large, that venesection has become an obsolete operation, or an operation which is, at most, limited to a few old fogies—as they are sarcastically styled—ignorant of the benign progress of the healing art, and of the tolerance of the system. Whether this opinion be true or erroneous, this is not the time nor the place to inquire; suffice it to say that my solemn conviction is that the neglect into which this operation has fallen, not only, in midwifery, but in general practice, is the cause, annually, of the loss of thousands upon thousands of human lives that might otherwise be saved.

If I were asked under what circumstances a pregnant woman, in sound health, without any complications, ought to be bled, I should answer, first, when she is threatened with abortion, miscarriage, or convulsions; secondly, when there is a rigid os, obstinately refusing to yield after the labor has been in progress for six, ten, or twelve hours; thirdly, as a rule, in tardy labor in primiparæ, especially after the age of thirty; fourthly, where there is, so to speak, rigidity of the general system, including, of course, the sexual organs; fifthly, when there is a decidedly feverish condition of the system, associated with severe headache, great heat and dryness of the genital organs, a rigid os, or os and perineum, and inefficient, teasing labor-pains; and, lastly, in torpor of the uterus from the effects of inflammation, gout, or rheumatism, interfering with or retarding delivery. In all, or, certainly, in most of these conditions, I should follow up the effects of the bleeding with an anæsthetic, or a hypodermic injection of morphia. I solemnly believe that, if these rules were properly observed, the process of parturition would be greatly facilitated, the pains of labor materially abridged, and the risks of lacerations, which now stand as such a blot upon obstetric practice, would be reduced to the merest minimum, not to say anything about the much greater safety of the child, and of the more rapid recovery of the mother.

As to the quantity of blood to be abstracted, every case must be met on its own merits. While in some instances the loss of a few ounces may suffice, in others, especially in strong, robust, plethoric women, sixteen, twenty, or even thirty ounces may be required. Dr. Dewees, to whom is justly due whatever praise or blame attaches to this practice, occasionally bled to the extent of forty ounces before he succeeded in overcoming the rigidity of the os. Sometimes, indeed, he carried the operation even to syncope; always placing the patient in the erect or semi-erect position, so as to expedite and increase the effect.

Dr. Dewees informs us that he was led to adopt the employment of general bleeding in midwifery, near the close of the last century, from having witnessed its beneficial effects in the practice of Dr. Physick, in relaxing the muscles in dislocations of the shoulder-joint.

Out of the injuries now considered, often unavoidable, but in the great majority of cases the effects of gross ignorance, timidity, indecision, or the maladroit use of the forceps and of other instruments, has grown gynecology, a twin sister of surgery, the scientific foundation of which was laid hardly thirty years ago by the immortal Sims, aided by Bozeman, Thomas, and Emmet, of America, by Baker Brown, of London, and by Gustav Simon, of Heidelberg, all pioneer laborers in this great field of the healing art, now trodden by many thousand feet, and illustrated by special treatises and contributions alike honorable to their respective authors and creditable to their respective countries.

Dr. Battey, of Georgia, said that he had never regretted the use of the lancet; he does regret that he has not used it more boldly.

Dr. Campbell, of Georgia, remarked that he was glad that his views were consonant with those of Dr. Gross and Dr. Battey. Bloodletting in labor and in eclampsia has been unjustly condemned and laid aside. As substitutes we have chloroform, chloral, potassium bromide and cold to the head. If puerperal convulsions be due to anæmia of the brain, why give such exsanguinating remedies as these? If, however, uræmia be their cause, then the presence of urea is due to renal congestion. Then we should bleed to bring about healthy elimination from the kidneys. An experiment he performed on a common fowl, makes him question the statement that bleeding will produce convulsions. For having cut all the tissues through down to the cervical cord in front, the bird died without a struggle.

Dr. T. B. Harvey, of Indianapolis, with the utmost respect and honor for the great author, thought the subject should be freely discussed. He thinks the other side ought to have an expression of opinion. He began to bleed because of the teachings of Dewees, but he now obtains better results from chloroform and opium.

Dr. R. S. Kinloch, of South Carolina, was anticipated in some remarks by Dr. Harvey. Dr. Gross is an illustration of the power of early impressions. He disagreed entirely with the statements made in the paper. He has never bled in a practice of thirty-five years, and has lost but two cases dependent on the parturient state. Would Dr. Gross have applied the same rule to surgical cases? The effects claimed are *post hoc*, and not *propter hoc*.

Dr. Seymour, of Troy, N.Y., thinks the locality of importance in the good results from venesection. In Vienna it has been shown that bleeding is not necessary in the treatment of puerperal convulsions.

Dr. Thad. A. Reamy, of Ohio, said that, whilst mourning the death of the great man, his paper should stand on the same ground as if he were living. Hence, he could not let the article go on record unchallenged. In advocating "bleeding for fever," he does not make the distinction that the febrile state may be but the storm produced by sepsis. Why lessen the quantity of the blood when physiology and scripture teach that it is "the life thereof." For a rigid os and nagging pain, the rationalist would give chloral or morphia; or, if the pulse be high, an arterial sedative. In only a few cases of puerperal convulsions is bleeding best. Especially will these be few after one has once seen the effects of morphia. No doubt that the forceps are used too frequently by some, but the remarks of Dr. Gross cannot apply to the light and elegant forceps of modern times. The present student uses the instrument better after practice of two years than did the average practitioner of twenty years ago. Recent

works have made the subject plain. The forceps is not used more than once in fifteen or twenty-five cases.

Dr. Wathen, of Kentucky, thought that chloral and chloroform deplete the brain less than bleeding does. He has never seen a case in which fever or abortion could be benefitted by it. It is applicable in puerperal eclampsia, where excess of the blood in the brain may be fatal. All of the woman's blood is needed to sustain the puerperal condition properly. He thought the Society should not adopt so pernicious a doctrine until it had been well considered.

Dr. W. M. Findley, of Ohio, then read a paper on

THE RATE AND CAUSE OF MORTALITY IN ONE THOUSAND CASES OF LABOR IN PRIVATE PRACTICE.

The fatal result in some of the cases he accounted for by the wretched condition of the patients, and the time that elapsed before assistance could be given.

Dr. Wm. T. Lusk read a paper on

SUDDEN DEATH IN LABOR AND CHILDBED.

He was called to patient on the first of January, 1884, at 6 a.m. She had been in the erect posture for hours. She did not wish the forceps to be used. At 1 p.m. her face was colorless, but there were no symptoms of suffering and an anæsthetic was given. A child was delivered by means of the forceps. As was anticipated, hemorrhage occurred, and was arrested by hot-water injections after a few pints of blood had been lost. The patient had all the appearances of severe shock, and died at 7:30 p.m. He considered the causes of sudden death resulting from pulmonary embolism and air in the veins, and illustrated his remarks by the histories of cases and the results of autopsies. He considered, therefore, death as resulting from nerve exhaustion or shock, and in which neither air-bubbles nor embolisms are found. Pathology teaches shock to be due to reflex paralysis, especially of the splanchnic nerves. The causes predisposing to severe shock are well known in military surgery, and it would be singular could not similar conditions prevail in childbed. In the process of labor the torture is as great as that which victims of justice once suffered, in whom, as is well known, *shock* often put an end to the agony. He insisted, in conclusion, on the dangers of a prolonged first stage when the membranes are unruptured.

Dr. B. B. Browne, of Maryland, then read a paper on

MALFORMATIONS IN THE FEMALE SEXUAL ORGANS RESULTING FROM ARREST OF DEVELOPMENT.

CASE 1. A small female, who never menstruated. The external genitals were well developed, the vagina ending in a cul-de-sac, one and one-quarter inch long. Neither uterus nor ovaries could be detected.

CASE 2. A.R., had periodical headaches and had never menstruated. External genitals normal, hymen intact when cut, and infantile cervix

perceived. Electricity was used once a week ; the patient menstruated, and the uterus developed.

Case 3. M.T., aged nineteen. Had never menstruated; she had monthly pains in the head, relieved by epistaxis. The uterus was small, the cervix nipple-shaped, and the os permitting the passage of a probe. Cured by electricity.

Case 4. Autopsy of a female, aged nineteen; had never menstruated; vulva natural, vagina ending in cul-de-sac three inches deep, no rugæ on surface. Bladder and rectum adherent; ovary, uterus, and Fallopian tube of the size of an apricot.

Case 5. A.T., aged thirty-two. Had never menstruated; was well developed. There was intense sexual desire. Vagina ending in cul-de-sac two inches deep. The finger met an elevation—the rudimentary uterus—on the right side.

The author's conclusions are: 1. Malformations before puberty are due to arrest of development. 2. The ovary is developed with the uterus. 3. The external genital organs are developed independently of the internal. 4. The patulous urethra found is due to an arrest of development, and not to sexual intercourse. 5. In congenital atresia a patulous vagina is the rule, not in the acquired.

The following papers were read by title: "On a New Suture," by Dr. S. C. Dudley, of Illinois; "Mechanical Methods and Appliances in Uterine Dislocations and Distortions," by Dr. H. F. Campbell, of Georgia; "Surgical Operations for Cancer of the Uterus," by Dr. W. H. Byford, of Chicago.—*Medical News.*

EDINBURGH OBSTETRICAL SOCIETY.

Meeting of June 11th, 1884.

Dr. Peter Young in the Chair.

Specimens.

Dr. Milne Chapman, in the absence of Dr. Angus Macdonald, exhibited ovaries and tubes from a case of salpingo-oöphorectomy; microscopic sections of mucous membrane from a menstruating uterus, thirty-six hours after the commencement of the flow, and from a healthy uterus; microscopic sections of valvular lupus.

Dr. S. Keith exhibited three malignant ovarian tumors, two small ovarian tumors showing broad ligament cysts; also a tumor from a patient who had been in bed for ten years, but is now up and able to be about. Dr. Keith also exhibited a fibroid tumor weighing fifteen pounds, the removal being followed by recovery. There were scarcely any adhesions, and the tumor had only been growing for, at most, eighteen months.

Dr. M. Murray read a paper by Dr. Currie, of Sydney, on

Ante-Partum Hemorrhage.

After stating the great practical interest connected with hemorrhage during labor, Dr. Currie then described the following case, which, however, did not occur in his own practice, but as it was the object of an inquest, gives it considerable interest: In March Mr. R. was summoned to Mrs. H. on account of flooding. He arrived at the house at 6:30 p.m., and found that all bleeding had ceased. The woman's clothing was very slightly stained, and her pulse was of fair strength, and normal as regards rate, being about 70. There was a total absence of labor pains, and the os was not at all dilated. The patient had flooded in the early part of January, but the bleeding soon ceased under the usual treatment. On this occasion she was apparently considerably alarmed, and her feeling of dread was not lessened by the women about her, who prognosticated that the baby would be like a monkey, owing to the fact that some months before a monkey had jumped suddenly upon her. Owing to the parent's anxiety, Mr. R. remained in the house and watched her till 9:30, and as by that time there was no evidence of commencing pains, as the os was undilated, and as there was not any occurrence of hemorrhage, he decided to leave her. Before going home, he gave instructions that the patient was to be kept strictly quiet in the recumbent position, and he told the midwife to apply cold cloths to the abdomen and vulva if there was any return of the bleeding. He told the woman to send at once in the event of hemorrhage recurring or labor pains beginning, and he administered an opiate. About 5 in the morning of the succeeding day, Mr. R. was again sent for, but on his arrival at the house the patient was dead. She had, contrary to her orders, got out of her bed at half-past three; up to that time there had been no recurrence of hemorrhage, and immediately on her assuming the erect position, there had been a sudden gush of blood, she got very faint, said she was dying, and expired before help could be procured. The friends asserted that the doctor should not have left his patient on the previous evening, and that her death was due to neglect. Under these circumstances, an inquest was ordered to be held, and I was requested by Mr. R. to attend the post-mortem which was made by Mr. C. The uterine walls were unnaturally thin, and the placenta was attached to the anterior wall, fundal and meridional overlapping to a very slight extent the lower polar circle. At the lower and right margin there was separation to the extent of half or three-quarters of an inch, and there was a recent dark clot. The placenta was extremely friable and broke down in the attempts to detach it, and there were some old fibrinous adhesions between it and the uterine walls. On laying the amniotic side open a full-grown male fetus was found in Nægile's first position. The os was dilated to the size of half-a-crown or rather less. The heart was loaded with fat, and especially so on the auricles. There was nothing remarkable about

the valves or cavities, but the ventricle was very greasy on section, and under the microscope, advanced fatty degeneration was found. At the inquest Mr. R. stated the history of the case, and treatment he had adopted, which the coroner remarked did not appear to have been very successful. Mr. C. stated the results of the post mortem, but said that the heart disease was not sufficient to account for death, and that Mr. R. should have plugged the vagina. The coroner, in his summing up, said that there could be no doubt that the woman's death was due to her not having been plugged, and that had this measure been adopted Mr. R. would have left his patient in perfect security. Acting on his advice the jury censured Mr. R. for error of judgment and neglect.

Dr. Peter Young, after referring to accidental hemorrhage, remarked that the separation of the placenta may take place without uterine contraction, as in those cases where the central portions may separate without detachment of the margins. He held that accidental hemorrhage is more serious than placenta prævia. He animadverted on the statement made by the coroner as to the treatment by plugging the os, and advocated the principle of emptying the uterus at once by dilating the os and turning. Plugging is dangerous, as hemorrhage may continue even when the head is far down in the vagina. Dr. Young further gave the details of several cases, showing the futility of plugging, and enforced the line of treatment just mentioned.

Dr. Napier thought that Dr. Young had exhausted the methods of treatment, but held the opinion that it would be impossible to lay down hard and fast lines of treatment applicable to all cases.

Dr. Playfair objected to some of the treatment proposed by Dr. Young, but in the main supported the treatment of the cases under discussion.

Dr. P. A. Young made some remarks on the action taken by the coroner, and expressed his delight that there were no such officers in enlightened Scotland.

Dr. Underhill, in remarking on the case, held that the treatment adopted was perfectly justified under the conditions related in the paper, and expressed his entire sympathy with the medical man engaged in the case. He also thought that each fellow was perfectly justified in expressing his disapproval of the position taken by the coroner and his remarks on the case, and also his sympathy for the medical man in the case.

The following dialogue is reported to have taken place before a board of pharmacy:

Examiner.—What is a gum?
Student.—A sort of saliva.
Examiner.—Then you consider gum arabic to be a crystallized spit?
Student.—Well, not exactly, but something of that sort.
The student, strange to say, did not pass.

Abstracts and Selections.

I. — OBSTETRIC.

A Case of Rupture of the Uterus.—Samuel D. Gilbert, M.D., New Haven, Conn., reports the following in the *New York Medical Journal:*

At three o'clock a.m., December 2, 1883, I was called to attend Mrs. C., a native of Ireland, aged thirty-four, in her fifth confinement. I attended her in her fourth confinement November 6, 1881, which, like all the previous ones, was natural in every respect. She was a strong healthy woman, and had four children living.

On examination *per vaginam*, I found the os uteri of about the size of a dime, not rigid. Diagnosticated a breech presentation, which proved to be correct. The vagina and genital parts were cool and moist.

On examination of the abdomen externally, I found the head lying toward the left side, and I was struck with the fact that it seemed just under the skin, so thin were the uterine walls. Remained an hour, when, as the pains were slight and infrequent and the patient was in good condition, I left. Saw her again at 8 a.m., but, as there was no change, left directions that I was immediately to be summoned in case "good labor pains" began, and went about my day's work. Was called at 10:30 p.m. the same day, and reached the house, about three miles distant at 11:30. Found the os uteri nearly fully dilated, but the pains infrequent. As the woman was tired and nervous, I thought best to deliver. I ruptured the membranes and waited fifteen minutes, when, as there was no decided uterine action, I proceeded to deliver, having given chloroform, not to the extent of full anæsthesia, but a quantity sufficient to prevent the patient suffering much pain. I had great difficulty in the delivery, as the child was large and the parts were tense. It was fully half an hour before the lower extremities and the body and arms were born. When I had brought down the last arm the os contracted around the neck of the child with the grasp of a vise. After fifteen minutes the head was extracted, and, though I was as gentle as I could be, considering the force necessarily used, when the head emerged from the os there was a distinct and sharp tearing sound, and the patient instantly collapsed. The child, a female, was dead, and exhibited on the left parietal bone a depression, circular, and one inch and a half in diameter, with sharp edges. This was evidently a malformation, and not in any way occasioned by any deformity of the pelvic bones, which I am quite sure did not exist. I immediately gave my attention to the woman. Placing my left hand on the fundus, which contracted promptly, I found, on following up the funis, with my right hand, that it did not lead into the uterus, but through a rent which extended through the cervix and perhaps into

the body of the uterus slightly. (I had no time to make a very careful examination of the rent, as the woman was in collapse and apparently about to die). I promptly passed my hand through the rent, following the funis into the cavity of the abdomen, and fortunately found the placenta without much difficulty and removed it. The patient's whole condition was bad, the pulse exceedingly weak and thready; a large amount of blood was lost.

I at once resorted to stimulants and ergot, surrounded her with hot flat-irons, and, after half an hour, there was a fair reaction—much to my satisfaction. I then remained two hours, when, as reaction was well established, I went home. I visited the patient on the morning of the 3d, about 10 a.m., and found her much more comfortable than I anticipated. Pulse was of fair volume and strength; temperature about 100° F.

The abdomen was very tympanitic and exceedingly tender on pressure. Urine had been passed. Ordered sulphate of morphine, gr. ¼, to be given every two hours, unless the patient slept or was entirely free from pain. (The morphine was administered in full doses for eleven days, or until convalescence was well established.) Hot turpentine stupes were applied to the abdomen. When I made my first visit, December 4th, I found the lochia were quite offensive, and ordered the injection well up into the vagina of a gallon of warm water with a 2½ per cent. solution of carbolic acid. This was repeated twice daily, as long as there was any discharge, during a period of three weeks. From this time the patient did well, though, of course, the condition was a grave one. There were great tympanites and tenderness for several days, and an offensive discharge containing pus in considerable quantities, but all the bad symptoms gradually diminished.

The temperature never went above 104°, and only on one occasion over 103°. In a fortnight convalescence was well established, and in a month the woman was up and about the house doing her housework in a great measure. This was contrary to my wish, but she felt the necessity, as she was poor. She is at the present time, February 1st, quite well.

This differs from the majority of cases of rupture of the uterus reported, in the time and manner of its occurence, and also in the result.

I attribute the recovery of the patient, firstly, to her good constitution; secondly, to the full doses of morphine used continuously; and, lastly, to the thorough washing of the genital tract with an antiseptic solution. I did think at one time of injecting the solution through a glass drainage-tube directly into the cavity of the abdomen, but, as I could not well do it myself twice daily, and the patient had to depend on a poor nurse, I had her use the vaginal injection. The result shows that it was sufficient.

Five Cases of Extra-Uterine Pregnancy Operated upon at the Time of Rupture. By Lawson Tait, F.R.C.S., in *Brit. Med. Jour.*—Pending the dis-

cussion on the patholgy and treatment of extra-uterine pregnancy, which is to take place at Belfast, I desire to place on record this, the first series, as I believe, of cases operated upon at the time of rupture, that is, from the tenth to the thirteenth week. Most of us are familiar with such dramatic incidents as that of the actress in the Bois de Boulogne, where sudden or very rapid death occurred from hemorrhage due to a tear of a venous sinus in the rupture of an early Fallopian pregnancy. I have been unfortunate enough to see a large number of them, five or six and twenty, and of late I have been encouraged by my success in other abdominal diseases to try what surgery could do in these cases.

For this treatment, of course the difficulty was the diagnosis, but as I have now completely adopted the principle of always opening the abdomen when I find a patient in danger with abdominal symptoms, this barrier no longer exists. The diagnosis is, however, not so very difficult after all, for in many cases the existence of pregnancy has been suspected before the rupture occurred. It may be in the majority, however, that this misleading feature is present; the patient has never been pregnant, or at least not so for many years, and then the arrest of menstruation attracts no particular attention. If, however, it be found that the patient has been eight or ten weeks without a period, that there is a pelvic mass fixing the uterus and one side of it, and that sudden and severe symptoms of pelvic trouble and hemorrhage came on, the rupture of a tubal pregnancy may at once be suspected, and if an operation is to be done—and it clearly ought to be done—it must be done without delay. Early interference is a chief element of success in adbominal surgery.

The first case to which I was called after I had made up my mind as to the line to be adopted in such cases occurred on January 17, 1883, in the practice of Mr. Spackman of Woolverhampton. He had already made the diagnosis, and I was of opinion that he was perfectly correct. The patient had not had a child for many years, menstruation had been arrested for eleven weeks, and symptoms of rupture had occurred. When I saw her she was blanched from hemorrhage, and her skin had the peculiar staining which is chrracteristic of extravasation of blood into the peritoneum. The contents of the pelvis were fixed, and there was a distinct mass on the left side. The abdomen was distended, and the patient in great pain.

Though I feared that interference might have come too late, still I advised operation and proceeded to carry it out. I opened the abdomen, and found a quantity of clot derived from a ruptured Fallopian pregnancy on the left side. As well as I could I stitched the edges of the rent to the abdominal wound, but every touch caused hemorrhage, so that I had to desist without doing much save removing the fœtus and some of the placenta. The patient never regained consciousness, but died shortly after the operation.

On March 3, 1883, I saw, with Dr. Page of Solihull, a patient who had not been pregnant for many years, in whom there was a fixed mass in the pelvis and whose menstruation had ceased for three months. She had a high pulse and an exalted temperature and great pain. I advised abdominal section, and found the abdomen full of clot. The right Fallopian tube was ruptured, and from it a placenta was protruding. I tied the tube and removed it, and searched for but could not find the fœtus, and I suppose it got among the folds of the intestine and there was absorbed; certainly it has not since been seen. The patient made a slow recovery, but is now perfectly well.

On April 9, 1884, I opened the abdomen of a patient whom I had seen a few days previously with Dr. J. W. Taylor of Mosely, Birmingham. She had symptoms of acute pelvic inflammation, the organs being fixed, and there was a mass to the right and behind the uterus. She had not been pregnant for many years. I admitted her to my private hospital, and during the removal, doubtless, the rupture occurred. I found the abdomen filled by a quantity of blood-serum and free clot. The left tube was distended by a placenta which protruded through a rupture. I tied and removed the tube, but I could not find the fœtus. She made an easy recovery.

May 25 I operated on a patient aged 27, at the Hospital for Women, who had had two children, the last having been born three years ago. She had menstruated regularly until three months previously; pelvic pain had existed for some weeks, and was steadily growing worse. The uterus was fixed, and there was a large tender mass on the left side, and I diagnosed the case as possibly one of pyosalpinx. At the operation I found the left Fallopian tube had burst, and that there was a quantity of loose clot in the pelvis.

The fœtus was lying in the pelvis, attached to the placenta, which remained in the tube. The tube was adherent to the surrounding structures, but was easily detached, tied, and removed. She made an easy recovery.

The fifth case has just occurred, an illustration of the curious sequence of exceptional cases.

A. M, aged 34, married 14 years, has had four children, the last havhaving been born six years and a half ago. Her last menstruation was in April. Late in May she had an attack of intense abdominal pain which increased in intensity until June 3. I found the uterus fixed, and a boggy swelling to the left. The abdomen was swollen, and peritonitis was clearly beginning, the pulse and temperature being both high, intense pain occurring occasionally, and the patient's countenance being anxious. I opened the abdomen on June 5, and found the pelvic contents matted together with recent lymph and blood clot. The left tube was torn almost in two, and occupied by a placenta of about the tenth week. Fœtus not found. I

tied and removed the tube, drained the pelvis, and the patient made an easy recovery.

These cases all confirm the view of the pathology of extra-uterine pregnancy which I advanced many years ago, that in origin it is always tubal, and that its varieties depend merely on the direction in which rupture occurs. These results also confirm the policy of early interfering in such cases, for four out of the five have been easily and completely cured of one of the most formidable conditions of pregnancy. The first and only fatal case might have had a better ending if Mr. Spackman had seen her sooner, for he recognized the case at once and sent for me.—*Brit. Med. Jour.*

Influence of Age on the Labor of Primiparæ.—Kleinwaechter has studied this subject very thoroughly, not solely with reference to the length of labor, but with a view to determining the relative liability of primiparæ of various ages to antecedent menstrual disturbances, to the various accidental complications of pregnancy, and to puerperal disease. He has also estimated the relative frequency of instrumental interference, relative morbidity and mortality, the liability to abortion, and the influence of the mother's age on the sex and weight of children. The materials for study he found in the records of 920 cases of primiparæ in his clinic at Innspruck. These cases he divided into three groups, namely:

I.	16–19 years of age :	111 cases.
II.	20–29 " " "	694 "
III.	30–41 " " "	115 "

These groups he designated as the young, the midde-aged and the old respectively. From his study of these cases he draws the following conclusions:

1. Accidental complications which have nothing to do with pregnancy occur least often in the youngest primiparæ and most frequently in the old.

2. Ailments attributable to pregnancy are most frequent in the old, and next most frequent in the young.

3. Hemorrhages occur in the course of pregnancy most frequently in the young, and least frequently in the old.

4. Labor is most protracted in the old; in this respect the young stand next.

5. Inefficient pains are rarest in primiparæ in the bloom of sexual life, i. e. from 20–29, and oftenest in the old.

6. Therefore forceps must be used most often in the old, least often in the middle-aged.

7. The lengthening of the labor of primiparæ with the increase of age occurs chiefly in the first stage. The second stage is scarcely affected; the third not at all.

8. The mortality after forceps operations on primiparæ increases with the age.

9. The older the primipara, the greater is the danger of perineal laceration.

10. The older the primipara, the more likely a post-partum hemorrhage, though the frequency of the hemorrhage is not so great as hitherto supposed.

11. With increase of age the disposition of primiparæ to affections of the kidneys increases.

12. Frequency of œdema without kidney troubles also increases with the age.

13 The older the primipara, the less danger of mastitis, and the less likely her ability to suckle.

14. The old most frequently, the middle-aged least frequently are subject to puerperal fever and mania.

15. The morbidity and mortality is highest in the old and lowest in the middle-aged.

16. Spontaneous premature labor is most frequent in the old primiparæ, and rarest in the middle-aged.

17. With increased age the frequency of abnormal positions of the fœtus increases.

18. The older the primipara, the more likely is she to bear a boy, excepting only those between twenty and twenty-one who bear more girls than boys.

19. The liability to twin pregnancy in primiparæ increases in proportion to their age.

20. The older the primipara, the heavier and longer is the child, and the sooner does the umbilical cord fall off, while in the youngest it falls off latest.

21. With increase of age in primiparæ the frequency of deformed children decreases.

22. The mortality of first-born children increase with the mothers' age. Among the oldest primiparæ the infant mortality reaches a considerable height.—*Boston Méd. and Surg. Jour.*

A Case of Conception without Intromission. — By H. E. Longshore, M.D., in *Medical and Surgical Reporter.*

Mrs. A., aged nineteen, a native of Ireland, called on me for an examination. She had menstruated regularly and comfortably until after her marriage, some three months previously. As coition was out of the question, her condition seemed to her a mystery.

On examination I found the hymen closing the os externum.

After a long and diligent search, I found a foramen close under the urethra, where I depressed the hymen half an inch, and with my finger

in the rectum, succeeded in penetrating a distance of nearly two inches through the firm, inelastic hymen, when the point plunged into the vagina. This condition was undoubtedly congenital.

All of her symptoms indicated pregnancy. Dilatation was tried without success, then I operated with director and scalpel.

Six months after I attended the lady in confinement, which was normal, and she made a good recovery.

In this case the spermatozoa were abandoned in the depression of the hymen, and traveled through the narrow channel, two inches long, into the vagina, continuing their journey to the uterus to fecundate the ova.

This fact, with others of the same kind, demonstrates not only the possibility but the actual accomplishment of impregnation where the spermatozoa were abandoned a long distance from the uterus.

Rupture of the Aorta during Labor.—Heinricius reports in the *Arch. de Tocologie* a case of a woman who, during labor, was suddenly attacked with a convulsion, became comatose and died. A post-mortem examination showed a rupture of the aorta a short distance above the sigmoid valves, due, it was thought, to the increased blood pressure caused by the strong contractions of the womb and the abdominal walls.—*St. Louis Med. and Surg. Journal.*

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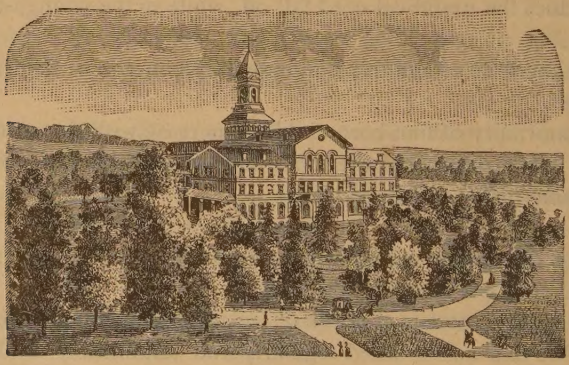

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